ATTITUDES OF PRINCIPALS IN IOWA PUBLIC SCHOOLS REGARDING THE DESIRABILITY/FEASIBILITY OF USING QUALITY CIRCLES PROCEDURES WITH PROFESSIONAL STAFF MEMBERS

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by

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An abstract of a Dissertation by
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The problem. Educators and laymen alike have expressed concerns regarding what appears to be deteriorating services of the public school system. Attention has focused upon the premise that educators are not operating in such a manner as to promote productive quality work. Representatives of business and industry recommend that educators incorporate the concept of Quality Circles in the professional setting. For Quality Circles to be successful in the school setting, it is important that building principals as educational leaders be supportive of the program. The purpose of this study was to determine how principals in Iowa public schools viewed the desirability/feasibility of using the six Quality Circles procedures with professional staff members to improve productivity and quality of work.

Procedure. One hundred eight building principals from public schools were selected for participation in the study. This selection was achieved through a stratified random sampling segregating districts by size and level.

Findings. The study yielded the following findings:
(1) Elementary, middle school and high school principals from both small and large districts predominately viewed the six Quality Circles procedures individually and in total as desirable and feasible to use with professional staff members to improve productivity and quality of work.
(2) Seventy percent of the principals from elementary, middle school and high schools agreed with the desirability/feasibility of using the six Quality Circles procedures individually or as a group with professional staff members to improve productivity and quality of work.

Conclusions. Quality Circles procedures involve staff members in a six-step concept of shared responsibility/decision-making experiences in the work place. Principals from public schools in Iowa regardless of administrative responsibility or school size view Quality Circles procedures singularly or as a group as desirable and feasible to use with professional staff members to improve productivity and quality of work.

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CHAPTER ONE

Introduction

The Problem

Public education has once more come under the close scrutiny of the patrons it serves. Considerable time, effort and print has been devoted these last several years to discussing the quality of the present American educational system. Much of the dialogue and national interest has recently focused upon a comprehensive report titled "A Nation at Risk." This report was submitted by the National Commission on Excellence in Education. The report warns the public that there is a severe continuous erosion of the foundations of the educational system in the United States.[1]

According to the findings of the commission, our school systems are permitting students to graduate who are ill-prepared to meet the challenges of today's society. The commission further alleges that the academic skills of graduates in the United States are not equal to those of

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[1]"A Nation at Risk: The Imperative for Educational Reform," National Commission on Excellence (Arlington, VA: American Association of School Administrators, 1983), p. 3.

their peers of many foreign countries.[1]

Along with the allegations concerning the quality of instruction in the nation's schools, the Commission charges the administrators of the schools with accepting the primary role in spearheading the several comprehensive reforms proposed by the study.[2] Regardless of the reasons for this renewed interest in the nation's educational system and regardless of the validity of the numerous allegations directed toward the profession itself, the fact remains that education and educators are very much the topic of national conversation.

Education is not along in its present dilemma concerning the product it places on the nation's marketplace. Business as well as industry has experienced similar problems in its sectors these last ten to fifteen years. The problems of business and industry manifest themselves in the form of continuous erosion of sales in the foreign as well as domestic trade markets. These losses in turn have brought about extensive lay-offs or loss of jobs for laborers and white collar workers. Along with the massive labor problems there has been an unprecedented

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[1]"A Nation at Risk: The Imperative for Educational Reform," p. 4.

[2]"A Nation at Risk: The Imperative for Educational Reform," p. 11.

increase in the number of business and industries finding themselves in the position of filing bankruptcy as the downward sales cycle continues. This downward cycle has caused business and industry to aggresively explore the possibility of incorporating major reforms in the management concepts now used in the United States.[1]

In their evaluation of the present dilemma, business women and industrialists have studied the management concepts used by the highly successful domestic and foreign firms functioning today. These firms have "caught-the-eye" of the researchers because of their ability to remain successful in a depressing economic environment. As a result of this renewed interest in management concepts businesswomen and industrialists in the United States were led to the presence of Japan as a major world entity in trade.

Japan, over a period of the last twenty years, has taken a significant share of the world trade market. This "take-over" has occurred in a steady, unpretentious fashion which attracted little attention during the process.[2]

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[1]Dr. Kenneth Gill, "Quality Circles Implications for the Superintendent," Iceline Quarterly, 4, No. 2 (January 1982), 5-6.

[2]Dr. Zane K. Quible, "Quality Circles: A Well-Rounded Approach to Employee Involvement," Management World, September 1981, pp. 10-18.

As American business and industry began to understand the massive encroachment of the Japanese upon the domestic market they began lobbying extensively for government controls to impose stringent import restrictions and product quotas upon foreign goods entering the nation. Continued study of the dilemma brought one major theme to the surface time and time again. The labor force of business and industry in the United States was guilty of low productivity and poor quality of goods and services. In studying how Japanese firms were operated, it soon became evident that their management concepts were very much different than those of American firms.[1]

Japanese managers and American managers who embrace these concepts agree that the main reason Japan has grown from a nation of "junk" producers to a world power in trade is mainly due to their concept of management identified as "Quality Circles."[2] Quality Circles originated in Japan in 1962 as a remedy to their unenvied reputation as producers of inferior products. The concept found its way into the United States during the early 1970's through contact with Japanese firms.

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[1]Lewis L. Bell, "Partnership with Business," The School Administrator, March 1982, p. 6.

[2]Bob Longsdorf, "Quality Circles: Could this Newest Japanese Import Revolutionize American Industry?" R.V. Dealer, June 1982, pp. 56-60.

Quality Circles

Quality Circles is a program that places management and labor in a partnership of shared decision-making, production-oriented responsibility. This process is "people-oriented" and is devised to encourage ownership, high productivity and quality of work. The process discourages the adversary relationship between labor and management so often found in American business and industry.[1]

The very heart of the Quality Circles program lies in the six procedures used by the workers in their everyday work. These six procedures are:

Procedure 1. Problem Identification. Quality Circles members using techniques such as brainstorming to identify problems particular to their area of work.

Procedure 2. Prioritizing Areas of Interest. Quality Circles members using skills such as data-gathering, active listening and consensus reaching to establish a list of problems to study.

Procedure 3. Analysis of Interest Area. Quality Circles members using learned research

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[1]David A. Nichols, "Can 'Theory Z' be Applied to Academic Management?" The Chronicle of Higher Education, September 1, 1982, p. 12.

skills to evaluate the problem selected for the study.

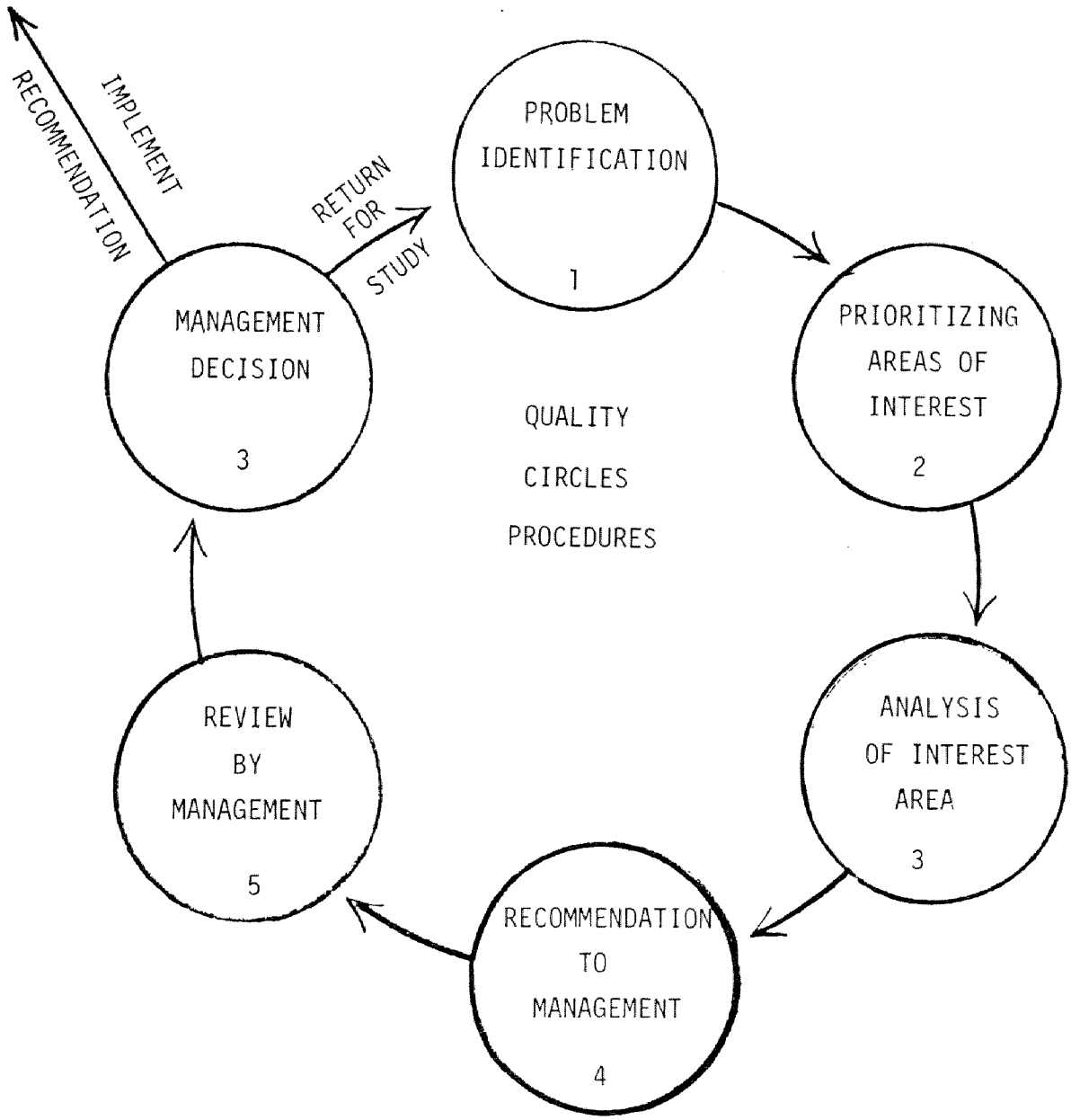
Procedure 4. Recommendation to Management. Quality Circles members using presentation skills such as chart making, diagrams, and written evaluations to present their recommendations to management.

Procedure 5. Review by Management. Quality Circles members working with management to provide information while recommendations are being considered.

Procedure 6. Management Decision. Quality Circles members working with management to implement recommendations for presentation accepted.

Circles members re-evaluating area of study if recommendation rejected or returned for further consideration.

A visual rendition of the six Quality Circles procedures follows:


PROBLEM IDENTIFICATION
1
PRIORITIZING AREAS OF INTEREST
2
ANALYSIS OF INTEREST AREA
3
RECOMMENDATION TO MANAGEMENT
4
REVIEW BY MANAGEMENT
5
MANAGEMENT DECISION
3
IMPLEMENT RECOMMENDATION
RETURN FOR STUDY
QUALITY
CIRCLES
PROCEDURES

Growth of the Quality Circles concept in the United States was at first a slow process. Businesswomen doubted the program's credibility in the American environment. Considerable discussion evolved around the vast cultural differences between Japan, the United States and the effects of these differences upon the program. Since the late 1970's the concept of Quality Circles has gained momentum and is now deeply entrenched in a large number of respected companies within the United States.[1]

A major prerequisite for a successful Quality Circles program is that of a management structure which is open to change and active and supportive in the process. Without this active promotion of change by management, programs such as Quality Circles, would not survive.[2] The parallel between management in business and management in education is an easy one to envision. The need for management in education to be receptive to change and active in the process is as important to its goals as is the concept to business.[3]

Studies of "successful" schools have identified

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[1]Quible, pp. 10-38.

[2]Lynne Chidley, "Ice I Staff Development Conferences," Iceline, 4, No. 2 (January 1982), 9.

[3]Kenneth R. Mechling, "Taking Charge," Principal, 62, No. 3 (January 1983), 62.

"effective" principals as paramount in the change process. "Effective" principals are not only receptive to change, but are active promoters and supporters of change in education.[1] In order for Quality Circles to be successful in the school setting it is important to understand how the principal views the desirability/feasibility of incorporating the program into the system.

Principals who have no personal commitment to the successful implementation of programs such as Quality Circles will not actively promote its credibility to staff members. Principals who are supportive of the concepts of Quality Circles may become active, supportive advocates of the program.

Significance of the Study

It would be unproductive for boards of education to mandate district-wide programs of Quality Circles without giving thought to its chances of success. In order to understand these chances of success it is important to know how supportive each building principal is of the proposed program.[2]

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[1]Thomas O'Neill Dunne and Rick Maurer, "Improving Your School Through Quality Circles," NASSP Bulletin, November 1982, p. 88.

[2]J. Lloyd Trump, A School for Everyone (Reston, VA: National Association of Secondary School Principals, 1977), pp. 61-65.

This study was designed to provide data which would furnish insight into the building principal's attitude toward the desirability and feasibility of using the Quality Circles program in the educational setting with professional staff members to improve productivity and quality of work.

Statement of the Problem

The purpose of this study was to determine whether public school principals in Iowa view Quality Circles procedures as desirable and feasible in working with professional staff members to improve productivity and quality of work in the educational setting.

Questions of the Study

For the purpose of this study, two major questions were posed:

Question 1: Do principals in Iowa view the Quality Circles Program as desirable in working with professional staff members to improve productivity and quality of work?

Question 2: Do principals in Iowa view the Quality Circles Program as feasible in working with professional staff members to improve productivity and quality of work?

Definition of Terms

Terms which had a particular significance in the study were defined as follows:

Building principal: District administrator responsible for a specific level of instruction. This responsibility may involve one building or several buildings depending upon the size and configuration of the school district. It does not include superintendents also serving as principals or principals serving more than one level of responsibility.

Desirability factor: Would it be beneficial to use in the school district?

Feasibility factor: Would it be practical to use in the school district?

Large school districts: Public school districts with a K-12 population of 600 or more students.

Professional staff members: Teachers and other employees of Iowa school districts holding valid Iowa teaching certificates.

Quality Circles Program: The sum of six Quality Circles procedures.

Middle school: A term used to identify various groupings of students in grades five through nine.

Small school districts: Public school districts with a K-12 population of less than 600 students.

CHAPTER TWO

History of Quality Circles

In order for one to fully appreciate the completeness of the Quality Circles Program as it is known today, it becomes necessary to look backward to world affairs in the late 1940's after World War II. The end of World War II saw Japan occupied by the allied forces with the United States Armed Forces in total control of the country. General Douglas MacArthur was in authority at this time and the immediate future of the Japanese people generally rested in his hands.

MacArthur undertook to redesign the basic structure of the country's government as well as that of the educational system in the hopes of bringing the Japanese people as quickly as possible into the flow of the merging global society. In order to achieve this monumental task in as short a period as possible MacArthur replicated a governing model and an educational model from one he felt to be efficient as anything presently functioning in the world. MacArthur designed both Japanese models after the structures used in the United States. History would later attest to the success of these two adopted versions in the Japanese culture.

Business and industry was functioning at a level of low productivity by the end of World War II. It was evident to MacArthur and his peers as well as perceptive Japanese leaders that decisive actions would have to take place in order to put the country on the road to economic stability. Japan needed very badly to reconstruct and reorganize her business and industry. It was imperative that the people find productive roles as soon as possible for the simple reason of self-survival. It was equally important that the country should attempt to partake in even the smallest portion of the world trade market.

In addition to the task of healing the ravages of war, another major hurdle facing the Japanese people was to overcome the reputation they had acquired over the years of being known as producers of "junk" goods.[1] Products which Japan had produced for the world market had been shoddy items created from tin and paper scraps. A good share of these items were the product of "cottage" industries where no quality standards or controls existed.

Japan's dilemma was further magnified by the fact that she had few natural resources of her own. This shortage was a severe limiting factor for her potential growth and demanded from the people a total national commitment in order to attain her obvious needs.

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[1]Gill, pp. 5-6.

MacArthur, as a major catalyst of the reconstruction movement brought into the country a number of "high-powered" American business leaders and economists to add expertise to the process. Among these consultants there would emerge a man who would in time be recognized as the founder of modern-day Quality Circles. This gentleman's name was Dr. Edward Deming.[1] Dr. Deming brought with him concepts of Statistical Quality Control as it related to business and industry. These concepts were conceived to approach the process of producing services and goods in a systematic predictable manner which would enhance the chances of success for manufacturing quality goods at a high level of productivity.

The concept of Statistical Quality Control as advocated by Deming was not entirely unknown in the United States; however, the economic situation in the United States was more of "feast" than of "famine." Because of this situation, few American businesses were interested in the change of styles Dr. Deming advocated.[2]

Japan's situation was obviously different than that of the United States. Not only was Japan trying to recover

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[1]Donald L. Dewar, The Quality Circle Handbook (Red Bluff, CA: Quality Circles Institute, 1980), pp. F2-2 - F2-3.

[2]Longsdorf, pp. 56-60.

from the trauma of being a defeated nation, it had never functioned at the level of quality and productivity enjoyed by the United States industries. Because of the situation the Japanese were anxious to adopt the Statistical Quality Control concepts advocated by Deming and his peers in the hope of making significant changes in the economic status of the country. In order for this needed reform to happen it was necessary for the forces of authority in Japan to accept the premise of Statistical Quality Control and step forward in a cooperative leadership role with men like Deming.

No organization was more respected in Japan than the Japanese Union of Scientists and Engineers (JUSE). This group of professional men had banded together early in the industrial history of the country to create a powerful organization dedicated to improving the quality of life for the Japanese people.[1] JUSE threw its total support behind the effort to adopt Statistical Quality Control and, as time would validate, would prove to be a major force in the movement's success.

In 1954 JUSE sponsored a group of American business/industrial experts for a lecture tour throughout Japan. Among these lecturers was a man by the name of Dr. Joseph M. Juran. Dr. Juran was an advocate of Statistical Quality Control methods in business and industry. His

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[1]Dewar, The Quality Circle Handbook, pp. F2-4 - F2-5.

concepts and methods were a modified version of the classical approach and tended to deal with the situation on a "humanistic" level. Juran's visit was so rewarding for the members of JUSE that he was persuaded to stay in Japan for an extended period of time working with leaders of business and industry. Juran's contribution to the evolving nation would prove to provide a framework for the soon-to-come Quality Circles Program.

During this period of learning and growing, there emerged from the JUSE organization a man who became the national leader in the educational/training processes needed to assure the success of the program. Dr. Kaoru Ishikawa was instrumental in creating educational materials and establishing national training procedures for the workers so that Statistical Quality Control concepts could be incorporated into major business and industries in a short period of time.[1]

Through this educational program workers and managers were provided with training during the work day in order that they might learn the objectives and techniques of the concept. Early morning radio and television lectures were provided for workers before the work day. These lectures dealt with the ideas of quality work and productivity of

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[1]Barbara Deane, "Quality Circle," San Francisco Sunday Examiner and Chronicle, August 1982, p. 6.

workers. This lecture program was pursued intensively by the Japanese people from the 1950's through the early 1960's. This intensive thrust of management/labor education brought the country to the doorstep of the Quality Circles program.

Japanese leaders designated the month of November each year as "National Quality Month." During November of each year numerous conferences, lectures and demonstrations were held to encourage the concept of quality control in production. JUSE in conjunction with on-going emphasis on quality in production created a special product mark (JIS) which was awarded only to goods produced that could pass rigid quality control guidelines. This product mark was a highly sought award by manufacturers as it guaranteed strong sales in the world market and reflected well on the producer of goods.[1]

In 1962 the Quality Circles Program as we know it today came into being in Japan. During this period the concepts of the program were presented in such a way that all workers could understand them.[2] Much of the information regarding the actual functioning of the circles in the past had been

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[1]Dewar, The Quality Circles Handbook, pp. F2-1 - F2-3.

[2]Zona Burke, "Quality Circles, Challenge, Opportunity for the Public Sector," Iowa Municipalities, October 1981, p. 4.

aimed at managers rather than workers. It became apparent to management that it would be necessary to involve foremen in a more intensive fashion if the program was to flourish. Because of this change in attitude new methods of informing workers were considered. A magazine was published for the benefit of the foremen of the industries. The publication promoted quality control concepts and employee involvement in the decision-making process at various levels of responsibility. This magazine, "Quality Control," was the first effort to involve the working man in the program.[1]

During May of 1962 there were three groups of Quality Circles registered with JUSE in Japan. By the end of the year there were twenty active circles in the country. In order to keep the evolution of the program in perspective it is necessary to recognize that Americans were to be credited with originating the concept of Statistical Quality Control. Men like Dr. Deming and Dr. Juran were major contributors to the success of the program in Japan and hence major contributors to the country's success in the world market.

Those who understand the growth of Quality Circles will recognize the contribution of men like Dr. Koaru Ishikawa and his peers. Without their talents and efforts the program could not have succeeded. From the small beginning

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[1]Dewar, The Quality Circle Handbook, p. F2-4.

in May of 1962, Quality Circles in Japan has grown today to involve over eleven million workers. This growth pattern of the concept made its presence well known on the world trade market.[1] In 1967 Dr. Juran wrote an article titled "The Quality Circle Phenomenon." This writing drew considerable attention from businessmen in the western world and introduced the program into the United States.

Japanese as part of their on-going program of educating managers and foremen had taken to sending teams of Quality Circle members to foreign countries to observe how they treated the concepts of quality of work and productivity of workers. During 1968 such a team sponsored by the JUSE visited America. The visit proved to be so successful that the event became an annual reciprocal occurrence between the countries.

A result of such exposure of the concept to Americans created an organization in the United States called the "American Society for Quality Circles" (ASQC). This organization sponsored workshops and conferences throughout the United States on a regional and national basis regarding the subject of quality control in business and industry.

In 1974 a group of Lockheed employees visited Japan for

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[1]Larry Romine, "They Get Rank and File Involved in Solving Everyday Problems that Affect their Work Lives that Enhance Productivity," Community and Junior College Journal, November 1981, p. 31.

the purpose of studying the Quality Circles Program. These people were so impressed with what they saw and were so convinced that the concept would work in the United States that several members stayed on for an in-depth study of the process.[1] An extensive study of the concept by Lockheed employees caused a recommendation for adoption of the program with little modification of the original model. Lockheed's resulting success in the program drew considerable attention from other major firms in the United States but growth on a national basis was slow for several years.

By 1980 the number of firms in the United States using the program had grown to a total of 230. This figure on a national basis was not overpowering but the names of the first included some of the strongest companies in the United States. Firms such as J.C. Penney, Uniroyal, Firestone, R.J. Reynolds, Bendix Corporation and Johnson & Johnson were but a few of the companies involved in early growth of the program. Quality Circles in the United States have grown to include 4,000 of the most prestigious firms in the country.[2]

The basic premise behind Quality Circles is that improved employee attitudes can lead to a greater

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[1]Deane, p. 6.

[2]Quible, p. 19.

willingness to work toward the goals of the organization. This concept is enhanced when the employers' needs are also met by the program.[1] Quality Circles is rooted in the concepts of behavioral sciences. Abraham Maslow, Fredrick Herzberg and Douglas McGregor are three influential researchers to be considered as one views the basics of the Quality Circles program.

Maslow's hierarchy of needs (basic, security, social, ego, self-actualization) are considered strongly in the circles program. Advocates of Quality Circles in business and industry are well aware of the fact that workers bring to the job their own personal needs in one form or another. Workers attempt to fill personal needs at work as well as at home. If needs can be met while on the job, the workers gain fulfillment. If workers cannot fill needs, dissatisfaction is manifested in a variety of ways.[2]

Herzberg, in his evaluation of motivators divided the concept into separate groups. He identified hygienic factors and motivational factors. Herzberg's hygienic factors were those things that simply helped keep the individual in a state of emotional balance. An example of this "hygienic" state would be a public health program. A

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[1]Quible, p. 10.

[2]Dewar, The Quality Circle Handbook, p. F5-7.

good public health program would be likely to help individuals keep from becoming ill through lessened changes of contracting disease. The program itself, however, would not have the ability to help make people more healthy than they were originally.[1] Hygienic factors cannot make people more healthy, happier or more satisfied. Hygienic factors can, however, prevent people from becoming ill, unhappy or dissatisfied.

Quality Circles concepts draw heavily upon Maslow's and Herzberg's theories. Herzberg's levels of needs are reflected in Quality Circles in the areas of reasonable pay for the job done, good working conditions and friendly co-workers. These items also fit well into Maslow's category labeled "hygienic factors."[2]

Herzberg and Maslow recognize motivators similar to Quality Circle procedures (employer recognition, responsibility, challenging meaningful work) as important to the worker. Herzberg's theories are considered in the Quality Circles program by creating opportunities for workers to be involved in meaningful work, opportunities for recognition and responsibility through the process of identifying and analyzing problems at their level of work.

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[1]Fredrick Herzberg, The Managerial Choice (Homewood, IL: Dow-Jones-Irwin, 1976), pp. 57-59.

[2]Dewar, The Quality Circle Handbook, pp. F5-7 - F5-9.

The process of management presentation fulfills the worker's need to have honest recognition.

McGregor, in his X-Y theory, recognized that the organization is at fault if it attempts to operate on the assumption that people are lazy and uncooperative. McGregor's Y theory is reinforced through the circles by involving workers in creative problem-solving issues, assuming workers will excel if viewed as worthwhile and that people will tend to operate as they see themselves perceived by others.[1]

The Quality Circles Program operates by stating specific objectives for achieving success. It also provides a process to follow to achieve those objectives for success. The concept of Quality Circles is simply stated and generic in structure. Because of this "universal" construction, it is capable of transfer from country to country and from discipline to discipline.

Quality Circles Objectives

The objectives of the Quality Circles Program in business can be modified to accommodate numerous environments. In this purest form as used by business and industry they are as follows:

1. Reduce errors and enhance quality of the work and of the product.

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[1]Dewar, The Quality Circle Handbook, pp. F5-9 - F5-11.

2. Inspire more effective teamwork between workers and management.
3. Promote job involvement by all workers.
4. Inrease employee motivation.
5. Create problem-solving capability.
6. Build an attitude of "problem-prevention."
7. Improve communication.
8. Develop harmonious manager/worker relationships.
9. Promote personal and leadership development.
10. Develop a greater safety awareness.
11. Promote cost reduction.[1]

Quality Circles procedures which serve to achieve the Quality Circles objectives are:

1. Problem identification techniques.
2. Problem selection techniques.
3. Problem analysis techniques.
4. Recommendation methods to management.
5. Review process by management of employee recommendations.
6. Management decision process regarding employee recommendations.[2]

Quality Circles in Education

Educators in the nation's schools have been struggling with concerns similar to those of business and industry. Much has been written and verbalized concerning steadily declining performances of American students these last several years.

Advocates of the Quality Circles Program have voiced the opinion that educators should be looking toward the concept as a method of turning around the perceived negative

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[1]Longsdorf, p. 57.

[2]James A. Bellanca, "Quality Circles Making School Productive," Vocational Education, May 1982, pp. 31-33.

path of learning in the United States today. Numerous educators have explored the idea but few have actually attempted to incorporate the concept into the professional structure of their organizations.

Lane College in Eugene, Oregon was one of the first educational systems in the United States to attempt to use the Quality Circles Program with professional staff members as well as support staff. The motivating force in this pilot program was Casey Fast. Mr. Fast's organization became well known in the field of Quality Circles through his numerous writings.[1]

Piedmont College, located in Charlotte, North Carolina also claims to be one of the first educational systems to incorporate the concept into their organization. Piedmont College undertook to establish a Quality Circles Pilot Program in 1981. They monitored the process through 1983 and then published a summary of the program for public distribution. Though general in nature, the publication does provide some insight into the implementation of such a program in the educational setting.[2]

Paramount on the list of priorities for a successful

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[1]Romine, p. 31.

[2]Lynn H. Moretz, "Quality Circles in Education," North Carolina Department of Community Colleges Division of Planning and Research Services Occupational Education Research Services, June 1983, pp. 1-3.

Quality Circles Program is the need for top level and middle level management to exercise a true ownership in the concept. Unless complete management ownership can be achieved, the chances for success of the program are slim.[1] Nowhere is this ownership more needed than in the educational setting. P. L. Cox indicates the "assistors of change in school systems, the central office, and principals must be supportive of any change that is to take place if it is to be true and lasting change."[2]

Lynn Chidley of the Illinois Center for Educational Improvement indicates that the principal must "clear-the-way" for the professional staff in making change that involves them in new roles of school decision making in the school setting. Chidley maintains that administrative leadership and ownership are most important in providing a dynamic staff development program that involves participation of the principal as well as support.[3] In recent evaluations of criteria that identify characteristics of "effective" schools, one of the major forces named is the

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[1]James O'Hanlon, "Theory Z in School Administration?" Educational Leadership, February 1983, p. 24.

[2]Pat L. Cox, "Complementary Roles in Successful Change," Educational Leadership, November 1983, p. 13.

[3]Lynne Chidley, "Homewood-Flossmor High School Leads with Quest," Iceline, 4, No. 1 (October 1981), 4.

building principal. It was unusual to find a school identified as "effective" that was not under the leadership of a building principal known as positive and supportive of change.[1]

In order for a program such as Quality Circles to be incorporated into the educational setting successfully, the building principal must be supportive of the concept. If the principal is unsure of the need for the program or unsupportive of the program he cannot serve in an effective manner of incorporating the concept into the organization.[2]

The Quality Circles Program is a concept that changes considerably the posture of the principal with the professional staff. Shared decision making and shared responsibility for the quality of work and productivity of the system are of the highest priority in the program. This approach to management/employee relationships in the educational setting could be considered the exception rather than the rule.

School districts have been guilty of jumping from one program to another without the benefit of knowing where their most important "facilitators of change" actually stand on the issues. It is often assumed that building principals

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[1]O'Hanlon, pp. 16-17.

[2]Bellanca, p. 32.

are fully aware of the proposed change and unquestionably in favor of the implementation of the change into the system. Assumptions such as these by board members and central office administrators can assure problems in the change process.

In considering the implementation of the Quality Circles Program into the school setting, it would be worthwhile on a financial basis and program basis for the district to first be aware of the attitude the principal holds toward the desirability and feasibility of such a program. Given this information, the district could then sculpture its goals and objectives for incorporating the program into the district in accordance with the information furnished by the building administrators.[1]

Summary

Quality Circles is a concept that is relatively new to business and industry in the United States. Little was known of the program prior to 1970. Because of this lack of information little research has taken place concerning the concept. The result of this lack of data is a void of research results for those interested in the program. What information there is concerning the concept comes in the form of trade journals, news magazines, newspaper articles,

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[1]Prudence Dyer and Marjorie Prentice, "Planning Educational Cultures," Educational Forum, May 1975, p. 481.

training manuals and company-published articles. Professionally written information is generally lacking. In its place one finds articles written by company staff containing more assertion than research data. Materials from Quality Circles training centers are higher in quality, but nonetheless lack the professional approach found in serious research projects.

CHAPTER THREE

Population and Sample

The population of this study was public school principals in the state of Iowa. The study was limited to only those principals serving at building level responsibility. Excluded from the study were superintendents, superintendents also serving as building principals, assistant principals and administrative assistants. Administrators serving as building principals were selected from elementary, middle school and high school levels of responsibility.

The 1982-1983 Department of Public Instruction Census Report was used to identify school districts regarding student population on a K-12 basis. The sample process involved categorizing all school districts into one of two categories regarding the size of student population. Schools which housed a K-12 student population of less than 600 children were identified as "small" school districts. Schools which housed a K-12 student population of 600 or more children were identified as "large" school districts.

Principals were then categorized in three levels of administrative responsibility. These levels were (1) elementary, (2) middle school, and (3) high school.

Eighteen principals were then selected randomly from each of the six categories. The result of this selection process provided a total sample of 108 subjects representing three levels of administrative responsibility from small and large school districts in the state of Iowa (see Table 1).

Table 1

Study Sample by School Size and Level of Administrative Responsibility

	Small School	Large School	Total
Elementary	18	18	36
Middle School	18	18	36
High School	18	18	36
Total	54	54	100

Quality Circles Background/Experience

Information for the study was derived from various sources. Background concerning the history of the Quality Circles program as used in business and industry was gathered through professional journals, reference books, manuals, training materials and periodicals. In-depth study of the Quality Circles concept took place with an extensive "on-the-job" internship served with Winnebago Industries, Forest City, Iowa. This internship took place during the summer and fall of 1983. This experience involved working with Quality Circles facilitators as well as Quality Circles

leaders and team members. The intern program provided the opportunity to observe working Quality Circles as they used the six procedures to accomplish the tasks concerning their work areas.

The six-step process of working with Quality Circles would be the same with educators as it was with Quality Circle members in business and industry. The only differences between the organizations would be the types of problems selected for study.

Instrumentation and Field Study

A packet of materials was designed to be sent to all principals selected. It included a letter of introduction providing basic information concerning the study. Information concerning the concept of Quality Circles, an explanation of each of the six Quality Circles procedures, a scenario pertaining to use of the six procedures in an educational setting and a fourteen question survey to be completed by the participants involved in the study completed the packet. (See Appendix A.)

Prior to sending the packet to the 108 participants, five building principals were selected to receive the information and to evaluate it for readability and clarity of purpose. The five principals used in the field test were not used in the actual study. As a result of the field test, adjustments were made in the materials prior to the actual survey process. (Compare Appendix A to Appendix B

for changes.)

Instrument Administration

On March 15, 1984, the packets containing the materials were sent to all principals selected for inclusion in the study. A period of approximately two weeks was provided for the participants of the study to complete and return the survey. On April 4, 1984, a follow-up letter was sent to those principals who failed to return the survey within a two-week period of time.

The surveys were designed to provide data that would pertain to the two major questions posed by the study. With the information gathered by the survey the major questions as well as the eight subquestions were spoken to in descriptive form with visual support of graphs.

Study Questions

1. Do principals in Iowa view the Quality Circles Program as desirable in working with professional staff members to improve productivity and quality of work?

2. Do principals in Iowa view the Quality Circles Program as feasible in working with professional staff members to improve productivity and quality of work?

Study Subquestions

1. Does the size of school district affect the way the principal perceives the desirability of using each individual Quality Circles procedure with professional staff

members to improve productivity and quality of work?

2. Does the size of school district affect the way the principal perceives the feasibility of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

3. Does the size of school district affect the way the principal perceives the desirability of using all six Quality Circles procedures with professional staff members to improve productivity and quality of work?

4. Does the size of school district affect the way the principal perceives the feasibility of using all six Quality Circles procedures with professional staff members to improve productivity and quality of work?

5. Does the level of administrative responsibility affect the way the principal views the desirability of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

6. Does the level of administrative responsibility affect the way the principal views the feasibility of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

7. Does the level of administrative responsibility affect the way the principal views the desirability of using the Quality Circles program with professional staff members to improve productivity and quality of work?

8. Does the level of administrative responsibility

affect the way the principal views the feasibility of using the Quality Circles program with professional staff members to improve productivity and quality of work?

Delimitation of Study

The population of the study was limited to principals actively serving public school districts in the state of Iowa as identified by the Department of Public Instruction Registrar 1983-1984. Assistant principals, principals serving two or more levels of instruction, administrative assistants and superintendents serving dual roles as principal and district superintendent were not included in the study. The total time devoted to investigation and completion of the study involved twenty-seven months beginning in February of 1983 and ending in May of 1985.

Methodology

The survey completed by principals selected for the study asked respondents to express their attitudes regarding each of the six Quality Circles procedures through the use of a four-point scale. A Likert scale allowed the respondent to select attitudes ranging from (1) strongly disagree, (2) mildly disagree, to (3) mildly agree, (4) strongly agree.

Each of the six Quality Circles procedures was rated by principals regarding its desirability for use with professional staff members to improve productivity and

quality of work. All six Quality Circles procedures as a group were also rated using the four-point scale concerning the desirability for use with professional staff. The same four-point scale was used to identify each procedure singularly and all six procedures as a group regarding the feasibility of use with professional staff members to improve productivity and quality of work (Appendix C).

Information gained through the survey was reported by a four-point scale of disagreement/agreement. This scale was collapsed into a two-point scale of disagreement/agreement regarding the desirability and feasibility of the six procedures. In reporting the agreement or disagreement with the desirability/feasibility of each procedure and all procedures as a group, percentages were used in each category.

The reporting process utilized graphs of percentages for each subquestion by school size and level of administrative responsibility. Each graph was followed by a descriptive narration.

Percentages were used in reporting the data acquired through the surveys rather than the chi square method as chi square procedures would not be reliable because of the low numbers in some of the cells.

CHAPTER FOUR

Findings of the Study

This study was designed to determine if school principals in Iowa view Quality Circles procedures as desirable and feasible in working with professional staff members to improve productivity and quality of work. One hundred eight public school principals in Iowa were selected through a stratified random sampling process. These principals comprised the sample for the study. Table 2 shows the returns of surveys by respondents by level of administrative responsibility and school size (see Table 2).

Table 2

Respondents by Level of Administrative Responsibility and School Size (N/%)

	Elementary Principals	Middle/Junior High Principals	High School Principals	Totals
Small Schools	7/22%	13/41%	12/37%	32/100%
Large Schools	13/48.2%	6/22.2%	8/29.6%	27/100%
All Schools	20/33.9%	19/32.2%	20/33.9%	59/100%

Data collected from the study concerning questions one and two were presented in brief descriptive form supported by tables indicating level of agreement expressed in percentages.

> Question 1. Do principals in Iowa view the Quality Circles Program as desirable in working with professional staff members to improve productivity and quality of work?

Principals who responded to the survey had a high level of agreement with each Quality Circles procedure. No procedure received lower than 87 percent agreement (see Table 3).

Table 3

Percent of Agreement with Desirability of Quality Circles Procedures Among all Principals

Procedure	Agreement
Procedure One (Problem Identification)	98.3%
Procedure Two (Prioritizing of Interest Area)	94.6%
Procedure Three (Analysis of Interest Area)	87.8%
Procedure Four (Recommendation to Management)	96.3%
Procedure Five (Review by Management)	89.5%
Procedure Six (Management Decision)	91.2%

Question 2. Do principals in Iowa view the Quality Circles Program as feasible in working with professional staff members to improve productivity and quality of work?

Principals who responded to the survey had a high level of agreement with the feasibility of each Quality Circles procedure. No procedure received lower than 79 percent agreement (see Table 4).

Table 4

Percent of Agreement with Feasibility of Quality Circles Procedures Among all Principals

Procedure	Agreement
Procedure One (Problem Identification)	94.6%
Procedure Two (Prioritizing of Interest Area)	91.2%
Procedure Three (Analysis of Interest Area)	84.5%
Procedure Four (Recommendation to Management)	79.4%
Procedure Five (Review by Management)	86.1%
Procedure Six (Management Decision)	81.1%

Efforts were made to differentiate between the responses of administrators from small and large school districts. For the purpose of this study, small schools were those districts having a K-12 enrollment of less than 600 students. Schools identified in the study as having 600 or more students on a K-12 basis were placed in the category labeled "large." In addition to separating small and large

school districts, the format of the study provided for separating the responses of principals from the three areas of administrative responsibility. This second separation enabled the writer to differentiate responses between elementary, middle, and high school principals. In addition to the two questions posed in the study, eight subquestions were tested.

> Subquestion 1. Does the size of school district affect the way the principal perceives the desirability of using each Quality Circles procedure with professional staff members to improve productivity and quality of work?

Procedure One (Problem Identification)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that procedure one was desirable. Elementary principals from large school districts agreed 92.3 percent (twelve agreements out of thirteen respondents) that procedure one was desirable.

Middle school principals from small school districts agreed 100 percent (thirteen agreements out of thirteen respondents) that procedure one was desirable. Middle school principals from large school districts agreed 100 percent (six agreements out of six respondents) that procedure one was desirable.

High school principals from small school districts agreed 100 prcent (twelve agreements out of twelve respondents) that procedure one was desirable. High school

principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure one was desirable (see Figure 1).

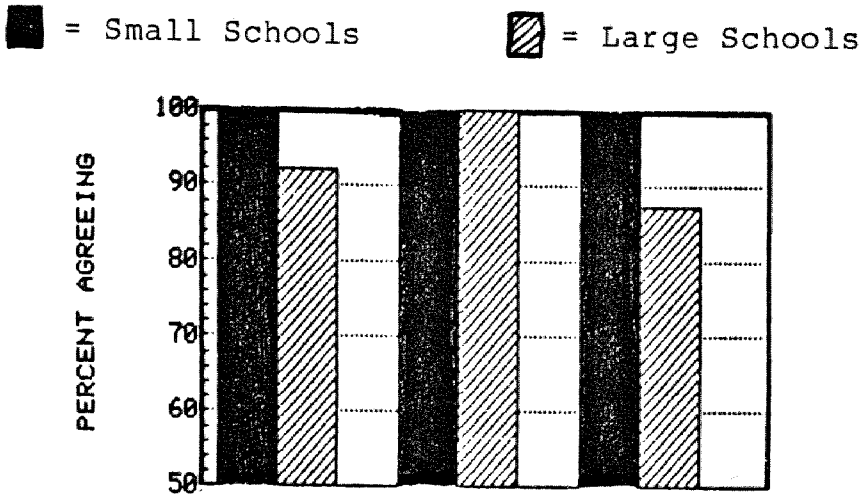


Figure 1

Percent of Agreement with Desirability of Quality Circles Procedure One (Problem Identification) Among all Principals by School Size and Administrative Level

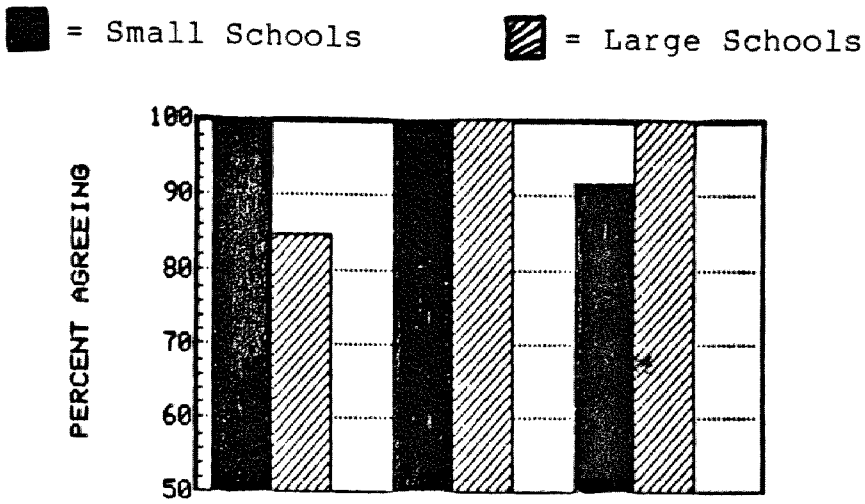
Note: See Appendix C, Tables 1-A, 1-B and 1-C. For feasibility, see Figure 7.

Procedure Two (Prioritizing Areas of Interest)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that procedure two was desirable. Elementary principals from large school districts agreed 84.7 percent (eleven agreements out of thirteen respondents) that procedure two was desirable.

Middle school principals from small school districts agreed 100 percent (thirteen agreements out of thirteen respondents) that procedure two was desirable. Middle school principals from large school districts agreed 100 percent (six agreements out of six respondents) that procedure two was desirable.

High school principals from small school districts agreed 91.7 percent (eleven agreements out of twelve respondents) that procedure two was desirable. High school principals from large school districts agreed 100 percent (eight agreements out of eight respondents) that procedure two was desirable (see Figure 2).



Elementary-Middle-High School

Administrative Level

Figure 2

Percent of Agreement with Desirability of Quality Circles Procedure Two (Prioritizing Areas of Interest) Among all Principals by School Size and Administrative Level

Note: See Appendix C, Tables 2-A, 2-B and 2-C. For feasibility, see Figure 8.

Procedure Three (Analysis of Interest Area)

Elementary principals from small school districts agreed 85.7 percent (six agreements out of seven respondents) that procedure three was desirable. Elementary principals from large school districts agreed 77 percent (ten agreements out of thirteen respondents) that procedure three was desirable.

Middle school principals from small school districts agreed 100 percent (thirteen agreements out of thirteen respondents) that procedure three was desirable. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure three was desirable.

High school principals from small school districts agreed 91.7 percent (eleven agreements out of twelve respondents) that procedure three was desirable. High school principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure three was desirable (see Figure 3).

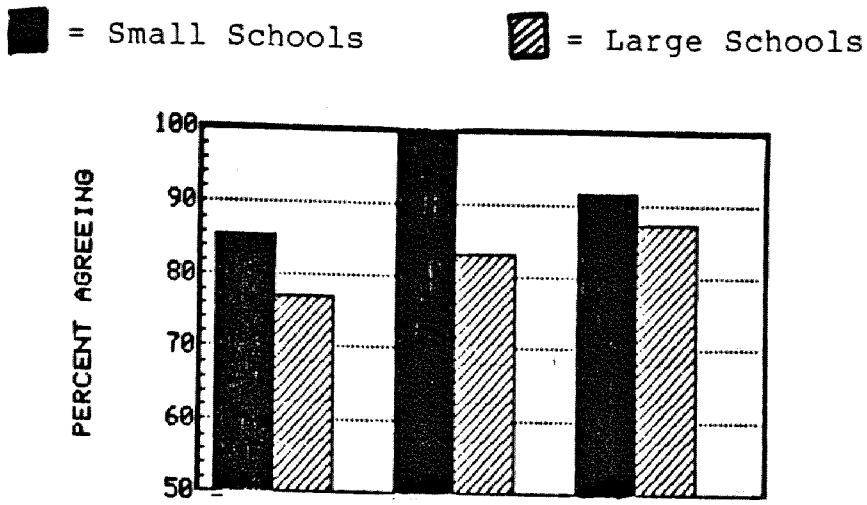


Figure 3

Percent of Agreement with Desirability of Quality Circles Procedure Three (Analysis of Interest Area) Among all Principals by School Size and Administrative Level

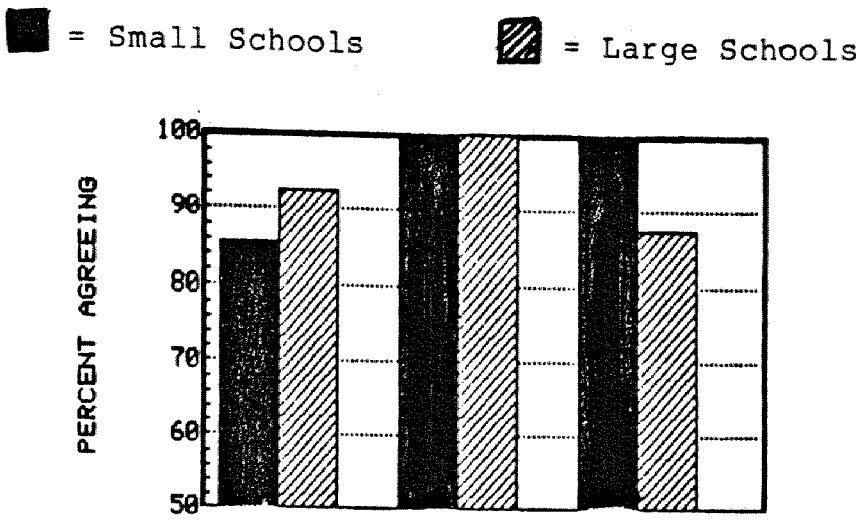
Note: See Appendix C, Tables 3-A, 3-B and 3-C. For feasibility, see Figure 9.

Procedure Four (Recommendation to Management)

Elementary principals from small school districts agreed 85.7 percent (six agreements out of seven respondents) that procedure four was desirable. Elementary principals from large school districts agreed 92.4 percent (twelve agreements out of thirteen respondents) that procedure four was desirable.

Middle school principals from small school districts agreed 100 percent (thirteen agreements out of thirteen respondents) that procedure four was desirable. Middle school principals from large school districts agreed 100 percent (six agreements out of six respondents) that procedure four was desirable.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that procedure four was desirable. High school principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure four was desirable (see Figure 4).



Elementary-Middle-High School

Administrative Level

Figure 4

Percent of Agreement with Desirability of Quality Circles Procedure Four (Recommendation to Management) Among all Principals by School Size and Administrative Level

Note: See Appendix C, Tables 4-A, 4-B and 4-C. For feasibility, see Figure 10.

Procedure Five (Review by Management)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that procedure five was desirable. Elementary principals from large school districts agreed 69.3 percent (nine agreements out of thirteen respondents) that procedure five was desirable.

Middle school principals from small school districts agreed 84.6 percent (eleven agreements out of thirteen respondents) that procedure five was desirable. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure five was desirable.

High school principals from small school districts agreed 91.6 percent (eleven agreements out of twelve respondents) that procedure five was desirable. High school principals from large school districts agreed 100 percent (eight agreements out of eight respondents) that procedure five was desirable (see Figure 5).

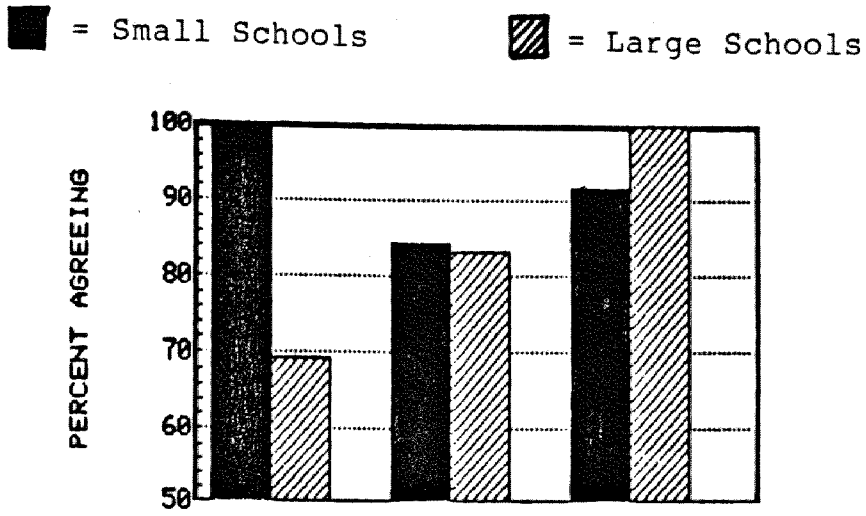


Figure 5

Percent of Agreement with Desirability of Quality Circles Procedure Five (Review by Management) Among all Principals by School Size and Administrative Level

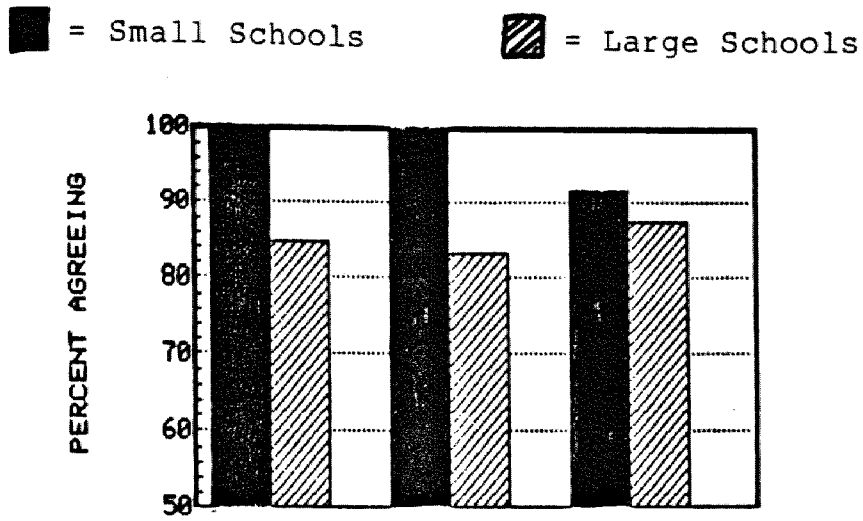
Note: See Appendix C, Tables 5-A, 5-B and 5-C. For feasibility, see Figure 11.

Procedure Six (Management Decision)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that procedure six was desirable. Elementary principals from large school districts agreed 84.7 percent (eleven agreements out of thirteen respondents) that procedure six was desirable.

Middle school principals from small school districts agreed 100 percent (thirteen agreements out of thirteen respondents) that procedure six was desirable. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure six was desirable.

High school principals from small school districts agreed 91.6 percent (eleven agreements out of twelve respondents) that procedure six was desirable. High school principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure six was desirable (see Figure 6).



Elementary-Middle-High School

Administrative Level

Figure 6

Percent of Agreement with Desirability of Quality Circles Procedure Six (Management Decision) Among all Principals by School Size and Administrative Level

Note: See Appendix C, Tables 6-A, 6-B and 6-C. For feasibility, see Figure 12.

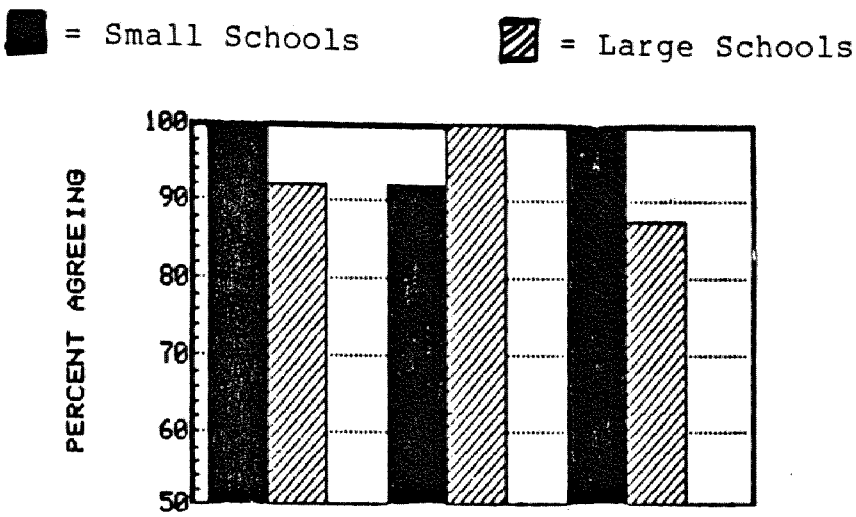
Subquestion 2. Does the size of school district affect the way the principal perceives the feasibility of using each Quality Circles procedure with professional staff members to improve productivity and quality of work?

Procedure One (Problem Identification)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that procedure one was feasible. Elementary principals from large school districts agreed 92.3 percent (twelve agreements out of thirteen respondents) that procedure one was feasible.

Middle school principals from small school districts agreed 92.3 percent (twelve agreements out of thirteen respondents) that procedure one was feasible. Middle school principals from large school districts agreed 100 percent (six agreements out of six respondents) that procedure one was feasible.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that procedure one was feasible. High school principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure one was feasible (see Figure 7).



Elementary-Middle-High School

Administrative Level

Figure 7

Percent of Agreement of Feasibility of Quality Circles Procedure One (Problem Identification) Among all Principals by School Size and Administrative Level

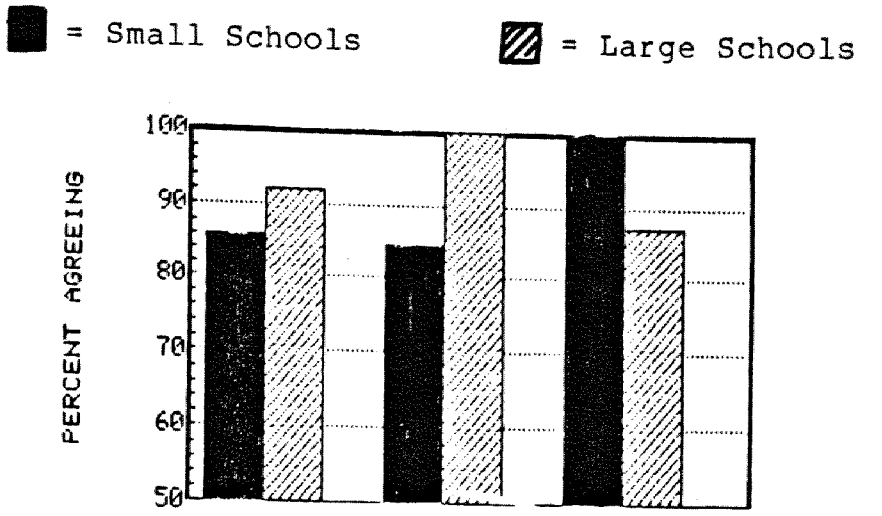
Note: See Appendix D, Tables 7-A, 7-B and 7-C. For desirability see Figure 1.

Procedure Two (Prioritizing Areas of Interest)

Elementary principals from small school districts agreed 85.8 percent (six agreements out of seven respondents) that procedure two was feasible. Elementary principals from large school districts agreed 92.4 percent (twelve agreements out of thirteen respondents) that procedure two was feasible.

Middle school principals from small school districts agreed 84.7 percent (eleven agreements out of thirteen respondents) that procedure two was feasible. Middle school principals from large school districts agreed 100 percent (six agreements out of six respondents) that procedure two was feasible.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that procedure two was feasible. High school principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure two was feasible (see Figure 8).



Elementary-Middle-High School

Administrative Level

Figure 8

Percent of Agreement of Feasibility of Quality Circles Procedure Two (Prioritizing Areas of Interest) Among all Principals by School Size and Administrative Level

Note: See Appendix D, Tables 8-A, 8-B and 8-C. For desirability see Figure 2.

Procedure Three (Analysis of Interest Area)

Elementary principals from small school districts agreed 71.4 percent (five agreements out of seven respondents) that procedure three was feasible. Elementary principals from large school districts agreed 77 percent (ten agreements out of thirteen respondents) that procedure three was feasible.

Middle school principals from small school districts agreed 77 percent (ten agreements out of thirteen respondents) that procedure three was feasible. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure three was feasible.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that procedure three was feasible. High school principals from large school districts agreed 100 percent (eight agreements out of eight respondents) that procedure three was feasible (see Figure 9).

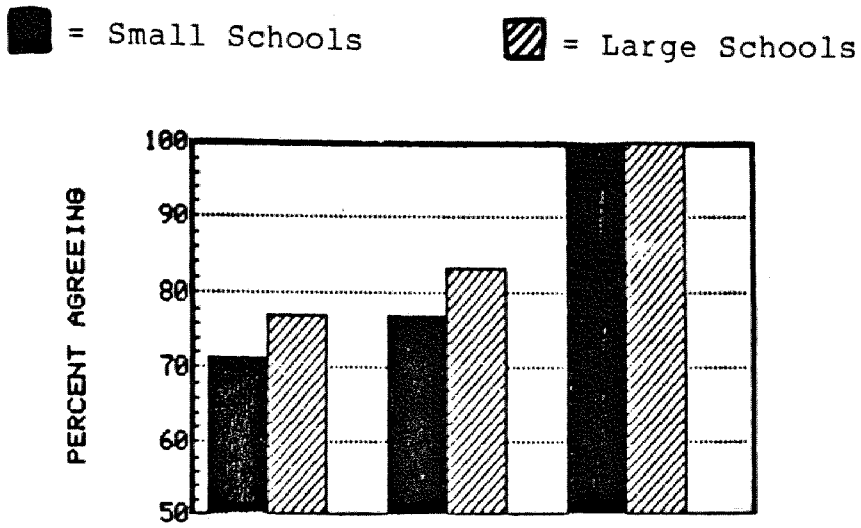


Figure 9

Percent of Agreement of Feasibility of Quality Circles Procedure Three (Analysis of Interest Area) Among all Principals by School Size and Administrative Level

Note: See Appendix D, Tables 9-A, 9-B and 9-C. For desirability see Figure 3.

Procedure Four (Recommendation to Management)

Elementary principals from small school districts agreed 71.4 percent (five agreements out of seven respondents) that procedure four was feasible. Elementary principals from large school districts agreed 77 percent (ten agreements out of thirteen respondents) that procedure four was feasible.

Middle school principals from small school districts agreed 61.6 percent (eight agreements out of thirteen respondents) that procedure four was feasible. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure four was feasible.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that procedure four was feasible. High school principals from large school districts agreed 87.5 percent (seven agreements out of eight respondents) that procedure four was feasible (see Figure 10).

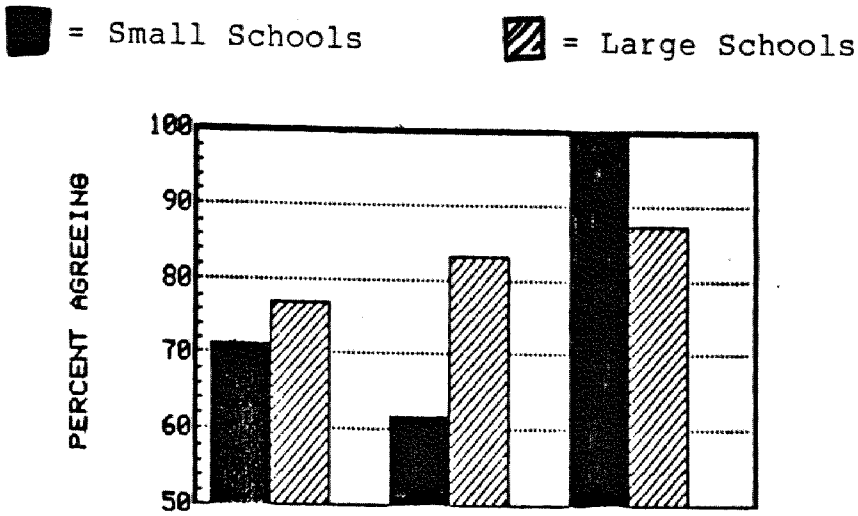


Figure 10

Percent of Agreement of Feasibility of Quality Circles Procedure Four (Recommendation of Management) Among all Principals by School Size and Administrative Level

Note: See Appendix D, Tables 10-A, 10-B and 10-C. For desirability see Figure 4.

Procedure Five (Review by Management)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that procedure five was feasible. Elementary principals from large school districts agreed 69.3 percent (nine agreements out of thirteen respondents) that procedure five was feasible.

Middle school principals from small school districts agreed 84.7 percent (eleven agreements out of thirteen respondents) that procedure five was feasible. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure five was feasible.

High school principals from small school districts agreed 91.7 percent (eleven agreements out of twelve respondents) that procedure five was feasible. High school principals from large school districts agreed 100 percent (eight agreements out of eight respondents) that procedure five was feasible (see Figure 11).

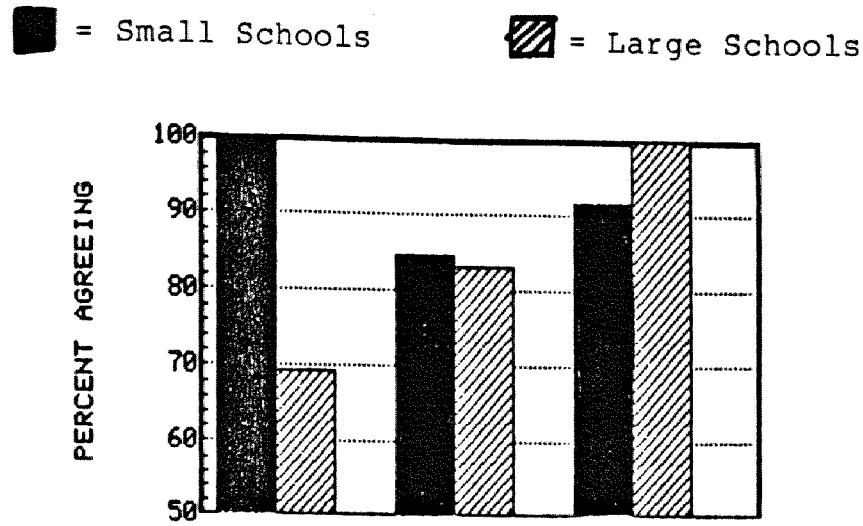


Figure 11

Percent of Agreement of Feasibility of Quality Circles Procedure Five (Review by Management) Among all Principals by School Size and Administrative Level

Note: See Appendix D, Tables 11-A, 11-B and 11-C. For desirability see Figure 5.

Procedure Six (Management Decision)

Elementary principals from small school districts agreed 71.6 percent (five agreements out of seven respondents) that procedure six was feasible. Elementary principals from large school districts agreed 69.2 percent (nine agreements out of thirteen respondents) that procedure six was feasible.

Middle school principals from small school districts agreed 84.7 percent (eleven agreements out of thirteen respondents) that procedure six was feasible. Middle school principals from large school districts agreed 83.3 percent (five agreements out of six respondents) that procedure six was feasible.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that procedure six was feasible. High school principals from large school districts agreed 74.8 percent (six agreements out of eight respondents) that procedure six was feasible (see Figure 12).

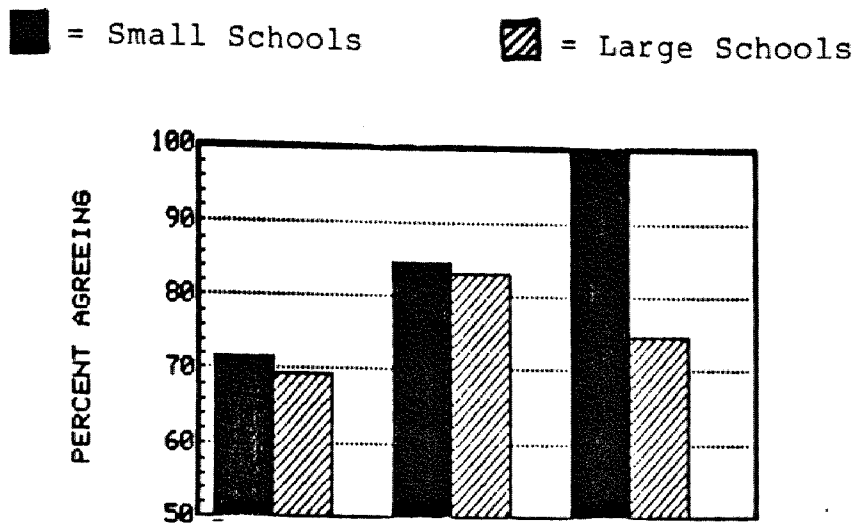


Figure 12

Percent of Agreement of Feasibility of Quality Circles Procedure Six (Management Decision) Among all Principals by School Size and Administrative Level

Note: See Appendix D, Tables 12-A, 12-B and 12-C. For desirability see Figure 6.

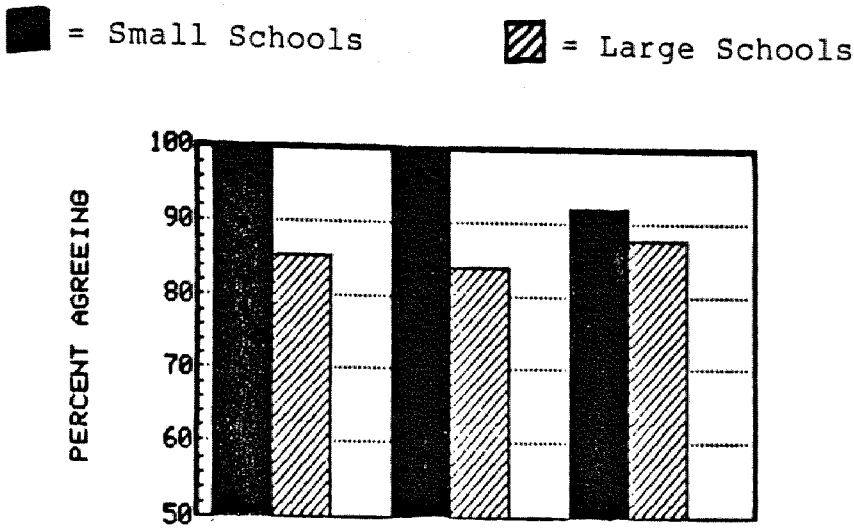
Subquestion 3. Does the size of school district affect the way the principal perceives the desirability of using all six Quality Circles procedure with professional staff members to improve productivity and quality of work?

All Six Quality Circles Procedure (Desirability)

Elementary principals from small school districts agreed 100 percent (seven agreements out of seven respondents) that all six procedures were desirable. Elementary principals from large school districts agreed 85.5 percent (eleven agreements out of thirteen respondents) that all six procedures were desirable.

Middle school principals from small school districts agreed 100 percent (thirteen agreements out of thirteen respondents) that all six procedures were desirable. Middle school principals from large school districts agreed 84 percent (five agreements out of six respondents) that all six procedures were desirable.

High school principals from small school districts agreed 92 prcent (eleven agreements out of twelve respondents) that all six procedures were desirable. High school principals from large school districts agreed 88 percent (seven agreements out of eight respondents) that all six procedures were desirable (see Figure 13).



Elementary-Middle-High School

Administrative Level

Figure 13

Percent of Agreement of Desirability of All Six Quality Circles Procedures Among all Principals by School Size and Administrative Level

Note: See Appendix E, Tables 13-A, 13-B, and 13-C. For feasibility, see Figure 14.

Subquestion 4. Does the size of school district affect the way the principal perceives the feasibility of using all six Quality Circles procedures with professional staff members to improve productivity and quality of work?

All Six Quality Circles Procedures (Feasibility)

Elementary principals from small school districts agreed 71 percent (five agreements out of seven respondents) that all six procedures were feasible. Elementary principals from large school districts agreed 70 percent (nine agreements out of thirteen respondents) that all six procedures were feasible.

Middle school principals from small school districts agreed 85 percent (eleven agreements out of thirteen respondents) that all six procedures were feasible. Middle school principals from large school districts agreed 84 percent (five agreements out of six respondents) that all six procedures were feasible.

High school principals from small school districts agreed 100 percent (twelve agreements out of twelve respondents) that all six procedures were feasible. High school principals from large school districts agreed 75 percent (six agreements out of eight respondents) that all six procedures were feasible (see Figure 14).

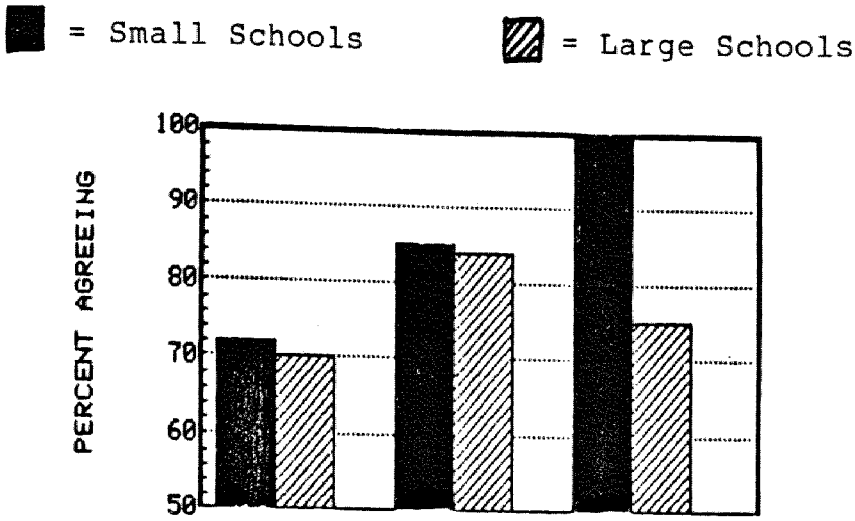


Figure 14

Percent of Agreement of Feasibility of All Six Quality Circles Procedures Among all Principals by School Size and Administrative Level

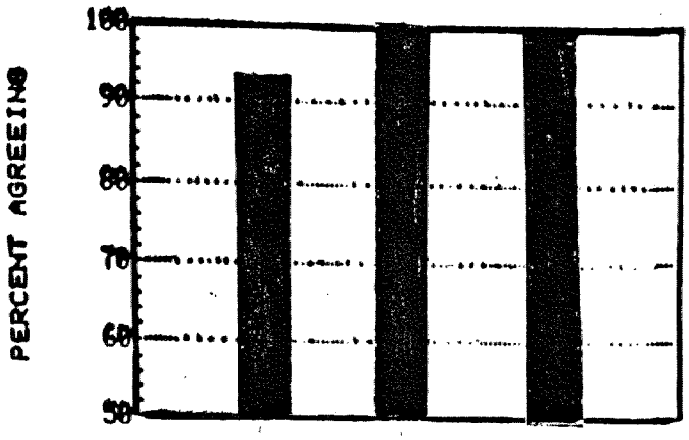
Note: See Appendix F, Tables 14-A, 14-B and 14-C. For desirability see Figure 13.

Subquestion 5. Does the level of administrative responsibility affect the way the principal views the desirability of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

Procedure One (Problem Identification)

Nine-five percent of the elementary principals (nineteen agreements out of twenty respondents) agreed procedure one was desirable. One hundred percent of the middle school principals (nineteen agreements out of nineteen respondents) agreed that procedure one was desirable. High school principals agreed 100 percent (twenty agreements out of twenty respondents) that procedure

one was desirable (see Figure 15).



Elementary-Middle-High School

Administrative Level

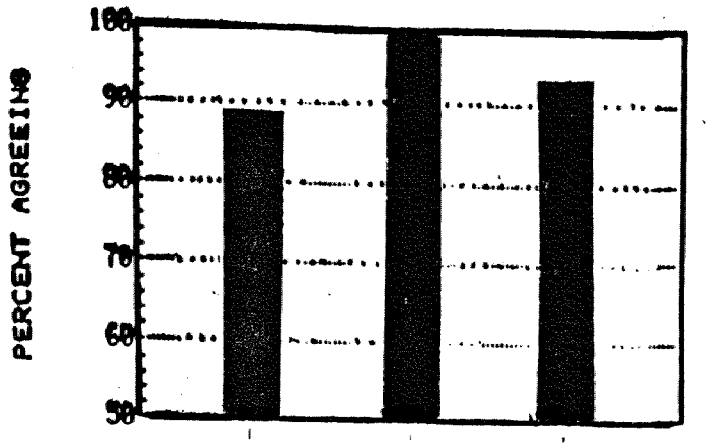
Figure 15

Percent of Agreement of Desirability of Quality Circles Procedure One (Problem Identification) Among all Principals by Administrative Level

Note: See Appendix G, Table 15-A.
For feasibility, see Figure 21.

Procedure Two (Prioritizing Areas of Interest)

Elementary principals agreed 90 percent (eighteen agreements out of twenty respondents) that procedure two was desirable. Middle school principals agreed 100 percent (nineteen agreements out of nineteen respondents) that procedure two was desirable. High school principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure two was desirable (see Figure 16).



Elementary-Middle-High School

Administrative Level

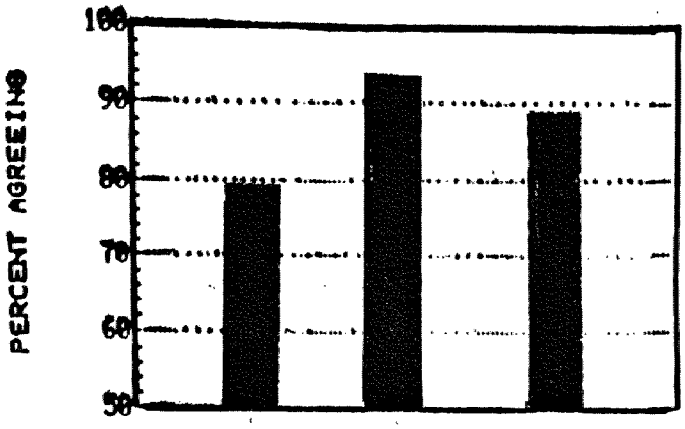
Figure 16

Percent of Agreement of Desirability of Quality Circles Procedure Two (Prioritizing Areas of Interest) Among all Principals by Administrative Level

Note: See Appendix G, Table 15-B.
For feasibility, see Figure 22.

Procedure Three (Analysis of Interest Area)

Elementary principals agreed 80 percent (sixteen agreements out of twenty respondents) that procedure three was desirable. Middle school principals agreed 94.7 percent (eighteen agreements out of nineteen respondents) that procedure three was desirable. High school principals agreed 90 percent (eighteen agreements out of twenty respondents) that procedure three was desirable (see Figure 17).



Elementary-Middle-High School

Administrative Level

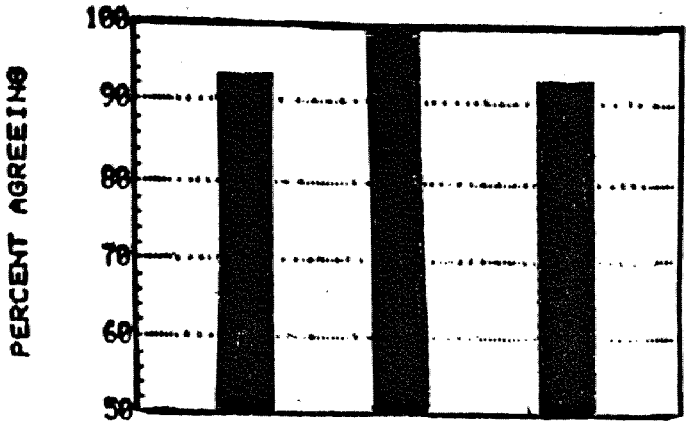
Figure 17

Percent of Agreement of Desirability of Quality Circles Procedure Three (Analysis of Interest Areas) Among all Principals by Administrative Level

Note: See Appendix G, Table 15-C.
For feasibility, see Figure 23.

Procedure Four (Recommendation to Management)

Elementary principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure four was desirable. Middle school principals agreed 100 percent (nineteen agreements out of nineteen respondents) that procedure four was desirable. High school principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure four was desirable (see Figure 18).



Elementary-Middle-High School

Administrative Level

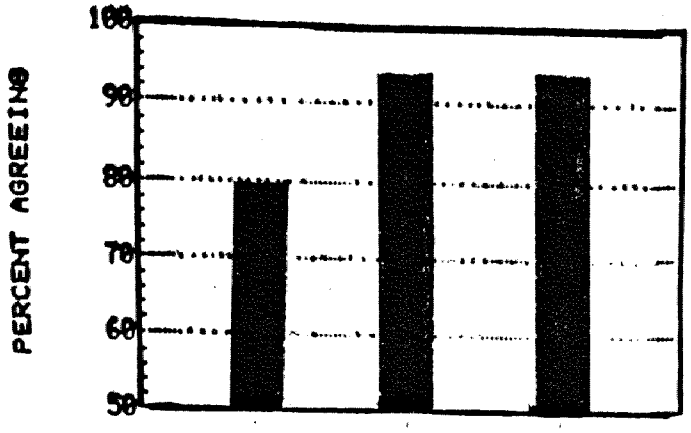
Figure 18

Percent of Agreement of Desirability of Quality Circles Procedure Four (Recommendation to Management) Among all Principals by Administrative Level

Note: See Appendix G, Table 15-D.
For feasibility, see Figure 24.

Procedure Five (Review by Management)

Elementary principals agreed 80 percent (sixteen agreements out of twenty respondents) that procedure five was desirable. Middle school principals agreed 94.7 percent (eighteen agreements out of nineteen respondents) that procedure five was desirable. High school principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure five was desirable (see Figure 19).



Elementary-Middle-High School

Administrative Level

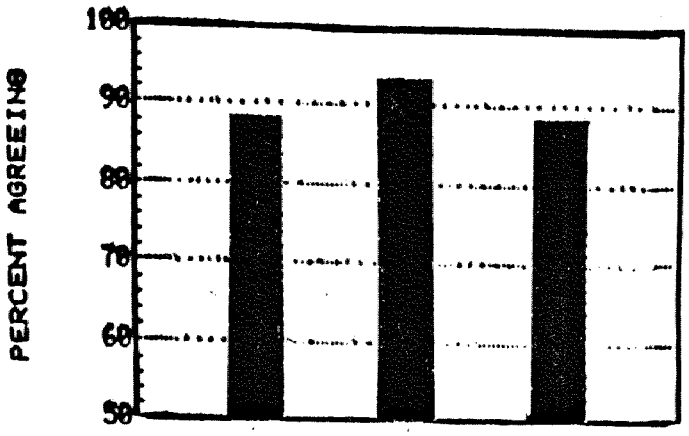
Figure 19

Percent of Agreement of Desirability of Quality Circles Procedure Five (Review of Management) Among all Principals by Administrative Level

Note: See Appendix G, Table 15-E.
For feasibility, see Figure 25.

Procedure Six (Management Decision)

Elementary principals agreed 90 percent (eighteen agreements out of twenty respondents) that procedure six was desirable. Middle school principals agreed 94.7 percent (eighteen agreements out of nineteen respondents) that procedure six was desirable. High school principals agreed 90 percent (eighteen agreements out of twenty respondents) that procedure six was desirable (see Figure 20).



Elementary-Middle-High School

Administrative Level

Figure 20

Percent of Agreement of Desirability of Quality Circles Procedure Six (Management Decision) Among all Principals by Administrative Level

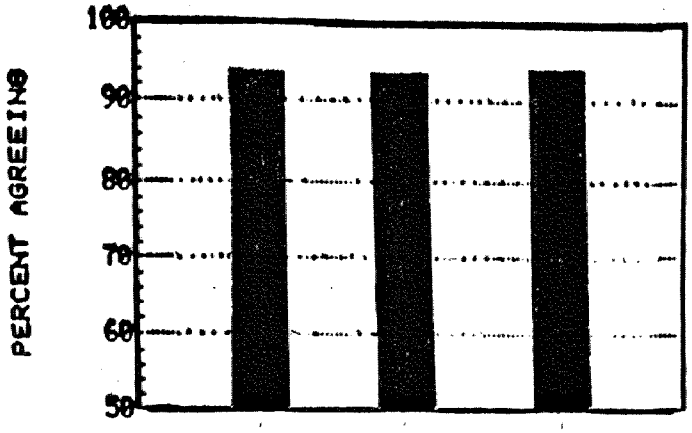
Note: See Appendix G, Table 15-F.
For feasibility, see Figure 26.

Subquestion 6. Does the level of administrative responsibility affect the way the principal views the feasibility of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

Procedure One (Problem Identification)

Elementary principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure one was feasible. Middle school principals agreed 94.7 percent (eighteen agreements out of nineteen respondents) that procedure one was feasible. High school principals agreed

95 percent (nineteen agreements out of twenty respondents) that procedure one was feasible (see Figure 21).



Elementary-Middle-High School

Administrative Level

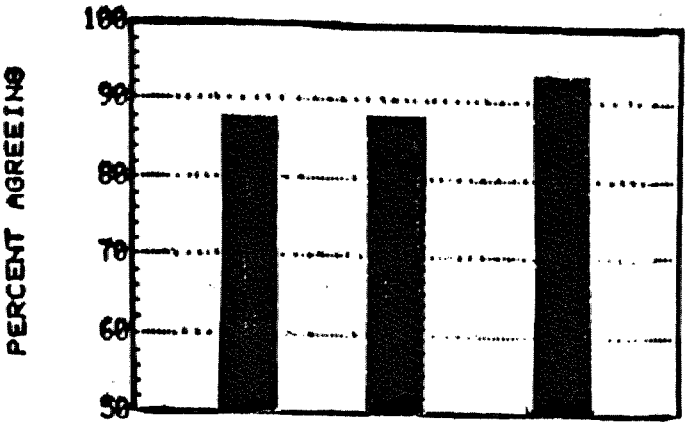
Figure 21

Percent of Agreement of Feasibility of Quality Circles Procedure One (Problem Identification) Among all Principals by Administrative Level

Note: See Appendix H, Table 16-A.
For desirability, see Figure 15.

Procedure Two (Prioritizing Areas of Interest)

Elementary principals agreed 90 percent (eighteen agreements out of twenty respondents) that procedure two was feasible. Middle school principals agreed 89.4 percent (seventeen agreements out of nineteen respondents) that procedure two was feasible. High school principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure two was feasible (see Figure 22).



Elementary-Middle-High School

Administrative Level

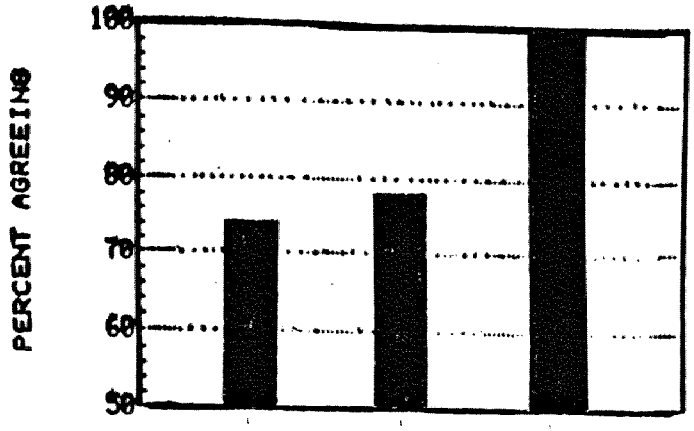
Figure 22

Percent of Agreement of Feasibility of Quality Circles Procedure Two (Prioritizing Areas of Interest) Among all Principals by Administrative Level

Note: See Appendix H, Table 16-B.
For desirability, see Figure 16.

Procedure Three (Analysis of Interest Area)

Elementary principals agreed 75 percent (fifteen agreements out of twenty respondents) that procedure three was feasible. Middle school principals agreed 78.9 percent (fifteen agreements out of nineteen respondents) that procedure three was feasible. High school principals agreed 100 percent (twenty agreements out of twenty respondents) that procedure three was feasible (see Figure 23).



Elementary-Middle-High School

Administrative Level

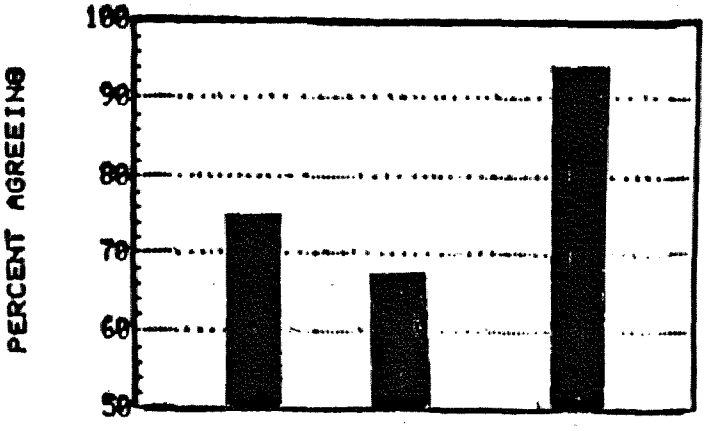
Figure 23

Percent of Agreement of Feasibility of Quality Circles Procedure Three (Analysis of Interest) Among all Principals by Administrative Level

Note: See Appendix H, Table 16-C.
For desirability, see Figure 17.

Procedure Four (Recommendation to Management)

Elementary principals agreed 75 percent (fifteen agreements out of twenty respondents) that procedure four was feasible. Middle school principals agreed 68 percent (thirteen agreements out of nineteen respondents) that procedure four was feasible. High school principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure four was feasible (see Figure 24).



Elementary-Middle-High School

Administrative Level

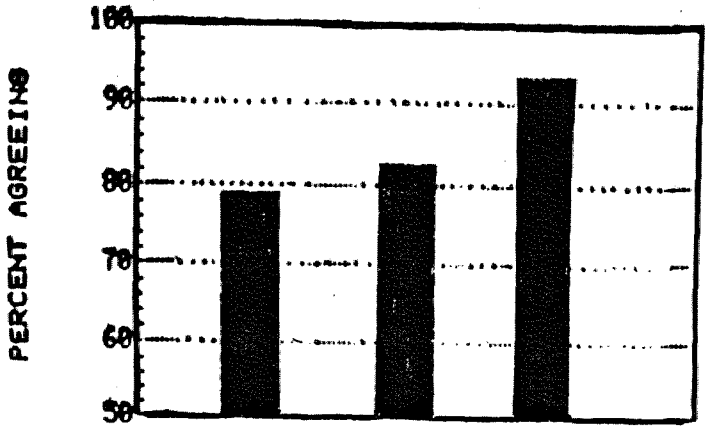
Figure 24

Percent of Agreement of Feasibility of Quality Circles Procedure Four (Recommendation to Management) Among all Principals by Administrative Level

Note: See Appendix H, Table 16-D.
For desirability, see Figure 18.

Procedure Five (Review by Management)

Elementary principals agreed 80 percent (sixteen agreements out of twenty respondents) that procedure five was feasible. Middle school principals agreed 84.2 percent (sixteen agreements out of nineteen respondents) that procedure five was feasible. High school principals agreed 95 percent (nineteen agreements out of twenty respondents) that procedure five was feasible (see Figure 25).



Elementary-Middle-High School

Administrative Level

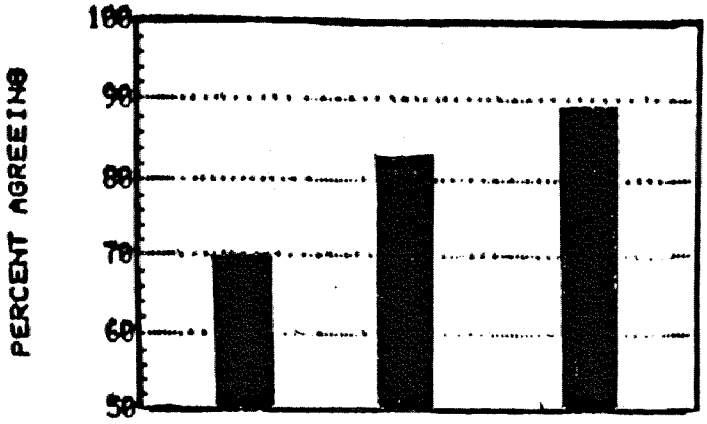
Figure 25

Percent of Agreement of Feasibility of Quality Circles Procedure Five (Review by Management) Among all Principals by Administrative Level

Note: See Appendix H, Table 16-E.
For desirability, see Figure 19.

Procedure Six (Management Decision)

Elementary principals agreed 70 percent (fourteen agreements out of twenty respondents) that procedure six was feasible. Middle school principals agreed 84.2 percent (sixteen agreements out of nineteen respondents) that procedure six was feasible. High school principals agreed 90 percent (eighteen agreements out of twenty respondents) that procedure six was feasible (see Figure 26).



Elementary-Middle-High School

Administrative Level

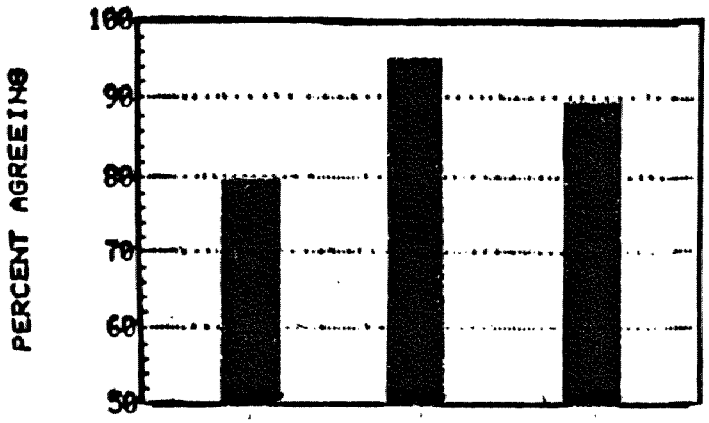
Figure 26

Percent of Agreement of Feasibility of Quality Circles Procedure Six (Management Decision) Among all Principals by Administrative Level

Note: See Appendix H, Table 16-F.
For desirability, see Figure 20.

Subquestion 7. Does the level of administrative responsibility affect the way the principal views the desirability of using the Quality Circles program with professional staff members to improve productivity and quality of work?

Eighty percent of the elementary principals agreed (sixteen agreements of twenty respondents) that the program was desirable. Ninety-five percent of the middle school principals agreed (eighteen agreements of nineteen respondents) that the program was desirable. Ninety percent of the high school principals agreed (eighteen agreements of twenty respondents) that the program was desirable (see Figure 27).



Elementary-Middle-High School

Administrative Level

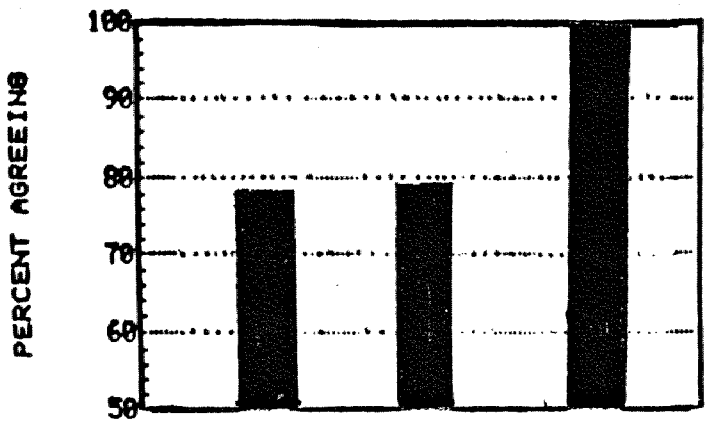
Figure 27

Percent of Agreement of Desirability of Quality Circles Program by Administrative Level

Note: See Appendix I, Tables 17-A, 17-B, 17-C. For feasibility, see Figure 28.

Subquestion 8. Does the level of administrative responsibility affect the way the principal views the feasibility of using the Quality Circles program with professional staff members to improve productivity and quality of work?

Seventy-five percent of the elementary principals agreed (fifteen agreements of twenty respondents) that the program was feasible. Seventy-nine percent of the middle school principals agreed (fifteen agreements of nineteen respondents) that the program was feasible. One hundred percent of the high school principals agreed (twenty agreements of twenty respondents) that the program was feasible (see Figure 28).



Elementary-Middle-High School

Administrative Level

Figure 28

Percent of Agreement of Feasibility of Quality Circles Program by Administrative Level

Note: See Appendix J, Tables 18-A, 18-B and 18-C. For desirability, see Figure 27.

CHAPTER FIVE

Summary and Conclusions

Within this chapter, the reader will find a brief summary of the purpose of the study, findings of the study, major conclusions that may be drawn from the study, and discussion and recommendations based upon the findings that are presented.

Purpose of the Study

If change of a positive nature is to take place within the educational setting, it is important that those in positions of authority are receptive to that change. It is even more important that those in authority take the role as active leaders in the change process. The building principal in public school systems has been identified as the most important individual in the change process in modern education. In order for a program to be successful in the school setting, the building principal must exhibit a positive attitude toward that program.

The purpose of this study was to determine whether public school principals at the building level view Quality Circle procedures as desirable and feasible in working with professional staff members to improve productivity and

quality of work in the educational setting. Two major questions and eight subquestions were posed in this study.

Summary of Findings Related to Questions and Subquestions

QUESTION 1. Do principals in Iowa view the Quality Circles program as desirable in working with professional staff members to improve productivity and quality of work?

Principals responding agreed (91.5 percent) that the Quality Circles program was desirable to use with professional staff members to improve productivity and quality of work.

QUESTION 2. Do principals in Iowa view the Quality Circles program as feasible in working with professional staff members to improve productivity and quality of work?

Principals responding agreed (81 percent) that the Quality Circles program was feasible to use with professional staff members to improve productivity and quality of work. Although principals ranked all Quality Circles procedures high in both desirability and feasibility, procedures four and six showed a greater drop in percentages from the desirability factor to the feasibility factor than did the other procedures.

SUBQUESTION 1. Does the size of school district affect the way the principal perceives the desirability of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from small and large districts that each procedure was desirable to use with professional staff members (see Table 5).

Table 5

Percent of Principal Agreement with the Desirability of Individual Quality Circles Procedures/by Percent/by School Size (N/%)

	Small Schools			Large Schools		
	Number Responding	Agree	%	Number Responding	Agree	%
Procedure One (Problem Identification)	32	32	100%	27	25	92.5%
Procedure Two (Prioritizing Areas of Interest)	32	31	96.9%	27	25	92.5%
Procedure Three (Analysis of Interest Area)	32	30	94%	27	22	81.4%
Procedure Four (Recommendation of Management)	32	31	96.9%	27	25	92.5%
Procedure Five (Review by Management)	32	29	90%	27	22	81.4%
Procedure Six (Management Decision)	32	31	96.9%	27	25	92.5%

SUBQUESTION 2. Does the size of the school district affect the way the principal perceives the feasibility of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from small and large districts that each procedure was feasible to use with professional staff members. Procedure six, although ranked high as being feasible by all principals, did fall several percentage points lower than the other five procedures of the program (see Table 6).

SUBQUESTION 3. Does the size of the school district affect the way the principal perceives the desirability of using all six Quality Circles procedures with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from small and large districts that all procedures as a group were desirable to use with professional staff members (see Table 7).

Table 6

Principal Agreement with the Feasibility of Individual Quality Circles Procedures/by Percent/by School Size (N/%)

	Small Schools			Large Schools		
	Number Responding	Agree	%	Number Responding	Agree	%
Procedure One (Problem Identification)	32	31	96.7%	27	25	92.5%
Procedure Two (Prioritizing Areas of Interest)	32	29	90.4%	27	25	92.5%
Procedure Three (Analysis of Interest Area)	32	27	84.2%	27	23	85.1%
Procedure Four (Recommendation of Management)	32	25	78%	27	22	81.4%
Procedure Five (Review by Management)	32	29	90.4%	27	22	81.4%
Procedure Six (Management Decision)	32	28	87.3%	27	20	74%

Table 7

Principal Agreement with the Desirability of All Six Quality Circles Procedures by School Size (N/%)

	Small Schools			Large Schools		
	Number Responding	Agree	%	Number Responding	Agree	%
All Six Procedures	32	31	96.8%	27	23	85%

SUBQUESTION 4. Does the size of the school district affect the way the principal perceives the feasibility of using all six Quality Circles procedures with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from small and large districts that all procedues as a group were feasible to use with professional staff members. Principals from small school districts did indicate that they perceived the feasibility of using all six procedures somewhat higher than did principals from large school districts (see Table 8).

Table 8

Principal Agreement with the Feasibility of all Six Quality Circles Procedures by School Size (N/%)

	Small Schools			Large Schools		
	Number Responding	Agree	%	Number Responding	Agree	%
All Six Procedures	32	28	87.5%	27	20	74%

SUBQUESTION 5. Does the level of administrative response affect the way the principal views the desirability of using individual Quality Circles procedures with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from each of the three levels of administrative responsibility that each Quality Circles procedure was desirable to use with professional staff members to improve productivity and quality of work (see Table 9).

SUBQUESTION 6. Does the level of administrative responsibility affect the way the principal views the feasibility of using each individual Quality Circles procedure with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from each of the three levels of administrative

Table 9

Principal Agreement with the Desirability of each Quality Circles Procedure by Administrative Level of Responsibility (N/%)

	Elementary			Middle School			High School		
	Number Responding	No. Agree	%	Number Responding	No. Agree	%	Number Responding	No. Agree	%
Procedure One (Problem Identification)	20	19	95%	19	19	100%	20	20	100%
Procedure Two (Prioritizing Areas of Interest)	20	18	90%	19	19	100%	20	19	95%
Procedure Three (Analysis of Interest Area)	20	16	80%	19	18	94.7%	20	18	90%
Procedure Four (Recommendation to Management)	20	19	95%	19	19	100%	20	19	95%
Procedure Five (Review by Management	20	16	80%	19	18	94.7%	20	19	95%
Procedure Six (Management Decision)	20	18	90%	19	18	94.7%	20	18	90%

responsibility that each Quality Circles procedure was feasible to use with professional staff members to improve productivity and quality of work. Elementary principals and middle school principals did not rank procedures three and four as high as did high school principals. Elementary principals also ranked procedure six lower than did middle school and high school principals (see Table 10).

SUBQUESTION 7. Does the level of administrative responsibility affect the way the principal views the desirability of using the Quality Circles program with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from each level of administrative responsibility that the Quality Circles program was desirable to use with professional staff members to improve productivity and quality of work (see Table 11).

SUBQUESTION 8. Does the level of administrative responsibility affect the way the principal views the feasibility of using the Quality Circles program with professional staff members to improve productivity and quality of work?

There was a high percentage of agreement among respondents from each of the three levels of administrative responsibility that the Quality Circles program was feasible to use with professional staff members to improve

Table 10

Principal Agreement with the Feasibility of Each Quality Circles Procedure by Administrative Level of Responsibility (N/%)

	Elementary			Middle School			High School		
	Number Responding	No. Agree	%	Number Responding	No. Agree	%	Number Responding	No. Agree	%
Procedure One (Problem Identification)	20	19	95%	19	18	94.7%	20	19	95%
Procedure Two (Prioritizing Areas of Interest)	20	18	90%	19	17	89.4%	20	19	95%
Procedure Three (Analysis of Interest Area)	20	15	75%	19	15	78.9%	20	20	100%
Procedure Four (Recommendation to Management)	20	15	75%	19	13	68%	20	19	95%
Procedure Five (Review by Management)	20	16	80%	19	16	84.2%	20	19	95%
Procedure Six (Management Decision)	20	14	70%	19	16	84.2%	20	18	90%

Table 11

Principal Agreement with the Desirability of the Quality Circles Program
all Levels of Administrative Responsibility (N/%)

	Elementary			Middle School			High School		
	Number Responding	No. Agree	%	Number Responding	No. Agree	%	Number Responding	No. Agree	%
Quality Circles Program	20	16	80%	19	18	94.7%	20	18	90%

Table 12

Principal Agreement with the Feasibility of the Quality Circles Program
by Levels of Administrative Responsibility (N/%)

	Elementary			Middle School			High School		
	Number Responding	No. Agree	%	Number Responding	No. Agree	%	Number Responding	No. Agree	%
Quality Circles Program	20	15	75%	19	15	78.9%	20	20	100%

productivity and quality of work. Although principals from all three levels of administrative responsibility agreed the Quality Circles program was feasible, principals from the high school level supported the concept 100 percent (see Table 12).

Major Conclusions

Conclusions, which are based upon the findings of the study, are as follows:

1. The principals in Iowa public school districts saw the Quality Circles program as desirable and feasible in working with professional staff members to improve productivity and quality of work.

2. In viewing each of the six Quality Circles procedures on an individual basis, principals from small as well as large school districts shared the opinion that each procedure was desirable and feasible to use with professional staff members to improve productivity as well as quality of work in the educational setting.

3. When viewing all six Quality Circles procedures as a complete package, principals from both small and large school districts were of the opinion that the process was a desirable and feasible one for use with professional staff.

4. Principals at all three levels felt the procedures individually and collectively were desirable and feasible to use.

Discussion and Recommendations

There were no schools identified during the review of literature which used the Quality Circles program with certified professional staff members. There were instances of a few schools using the program with support staff. These programs were incorporated into settings such as Lane College in Eugene, Oregon, and Piedmont College in Charlotte, North Carolina.

A review of the data gathered for the study indicated that principals from Iowa public schools gave evidence that they felt the use of the Quality Circles procedures was a worthwhile goal to pursue. The responses gathered from these administrators were weighed in favor of the desirability/feasibility of using these procedures in the school setting. Disagreement regarding any or all of these procedures was minimal.

It was assumed that the survey instrument design did not discourage returns by those principals disagreeing with the Quality Circles program. Because of this assumption, there should have been no difference between the respondents and non-respondents agreement regarding the Quality Circles program.

The results of this study indicate that principals in Iowa public schools are open to and supportive of incorporating Quality Circles programs within their respective school districts. The fact that the principals

from all three levels of administrative responsibility support the concept of this program would give reason to believe that further consideration should be given to its merits for the public school system. A logical future step would be to incorporate pilot programs of Quality Circles in selected districts for evaluation purposes. Evaluation of such programs could provide data regarding the desirability/feasibility of the program in practice. Administrators' responses would further give evidence that the program would have a good chance of success by positive, active support during the process of implementation. The Quality Circles program does have merit for the public school system.

Recommendations for Further Study

A logical pursuit to gather additional information regarding Quality Circles would be to undertake a similar study with professional staff members to gain insight into their attitudes regarding the program. The study undertaken with staff members could gather data regarding their understanding of the program as well as their attitudes regarding the use of the Quality Circles program to improve productivity and quality of work in the school setting.

A second avenue to pursue regarding Quality Circles could be that of comparing the program with programs now in use in public school systems to improve productivity and quality of work. A "spin-off" of this approach could be a

follow-up study gathering data pertaining to productivity and quality of work in schools using the concept on a "before/after" basis.

A third area to be considered for future research would be that of teacher attitude toward job responsibility in schools using the Quality Circles program and schools not using the program. Such a study, if well considered, could provide the researcher with interesting data comparing the two concepts.

Finally, a long-term study could be established to follow a Quality Circles school system to monitor the standardized test results over a period of years to evaluate if student skills in the academic/exploratory areas are indeed enhanced by the concept.

Accepted practices were incorporated in the study concerning follow-up procedures; however, actual returns of completed surveys accounted for only 55 percent of the 108 surveys mailed. Consideration must be given to the fact that this reported study was a first attempt to gather data regarding how principals viewed the concept of Quality Circles in education. It is encouraging to note that prevailing attitudes of principals in Iowa schools support this positive approach to dealing with present as well as future problems in education.

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APPENDIX A

INTRODUCTORY LETTER, DESCRIPTION OF QUALITY CIRCLES PROGRAM, SCENARIO, QUALITY CIRCLES PROCEDURES AND SURVEY FOR FIELD-TEST

Dear

This letter is written to you requesting your participation in a survey I am conducting for a doctoral study through Drake University. The information from the study will provide me with building principals' attitudes toward using a modified version of the Quality Circle Program in the educational setting with teachers.

Materials in this packet will explain the six procedures used in this modified version of Quality Circles. There will also be information regarding some of the communication tools used to implement the six procedures.

I will be asking you to read scenario which uses these six procedures on a hypothetical school setting. Following the scenario there will be a list of twelve statements concerning these procedures. Please respond to these twelve statements by circling the statement closest to your attitude.

Your participation in this survey is of great importance to me and is very much appreciated.

Respectfully,

D. R. Dakken

Quality Circles is a program conceived to increase the quality of work and the productivity of the workers in the organization. The program is based upon behavioral science concepts and is aimed at building positive relations between workers and management for the success of the organization.

When used in schools, professional staff members are divided into individual circles of anywhere from eight to twelve participants. Each circle is operated by a team leader who has had extensive training in people oriented skills such as brainstorming, concensus reaching, listening skills, group data gathering and presentation skills.

Each circle concentrates on areas of interest particular only to their work responsibility. They deal with mundane day to day situations that can be improved to make their work of a higher level of quality and productivity. Circle members never attempt to undertake concerns that directly affect other workers outside of their circle. Because of this philosophy, areas such as management and policy-making are left to administration and board.

When individual circles reach the point in their studies where they are ready to make recommendations for change to management, these recommendations (in the school setting) are made to a steering committee composed of school administrators.

The scenario you are about to read will take you through the six procedures used in the Quality Circle program. The steps will be explained briefly, but will accurately portray each procedure.

Scenario

River City Community School District has a K-12 enrollment of 1,300 students. The professional staff numbers 100 teachers.

River City has been involved in the Quality Circle program for four years now and supports ten circles of ten members each. Each circle is led by a staff member well trained in teaching other members of the circle, the skills of brainstorming, concensus reading, data gathering, communications and presentation skills.

PROCEDURES

Step #1. IDENTIFYING AREAS OF INTEREST

Under the leadership of the circle head, the team members brainstorm areas of their work that could be improved to provide a higher level of quality and productivity.

Through the brainstorming and recording processes, all identified areas that affect the circle's quality of work and level of productivity are listed for consideration.

Step #2. PRIORITIZING AREAS OF INTEREST

After listing the areas of interest established by the brainstorming process, the circle members use such skills as concensus reaching, active listening skills and data gathering to establish a priority list of areas to study. One area of interest above all others is selected by the circle for immediate study.

Step #3. ANALYSIS OF INTEREST AREA

Step three involves all circle members in dividing research responsibilities so the interest area may be fully evaluated during its weekly meetings.

As the analysis of the interest area progresses, objectives and time lines are set, problem-solving activities engaged in, and outside consultants used if required.

Step three is concluded when the circle has analyzed the area of interest in every way and reached group concensus on its recommendation to management.

Step #4. RECOMMENDATION TO MANAGEMENT

This step is important to staff members and administration alike as it provides the organization with recommendations that could benefit the total systems and it also offers the members of the circle the opportunity for positive professional recognition for their work.

In preparing the presentation, all circle members are active in one facet or another of the project.

Some members prepare charts, diagrams and written material to be used to support research and recommendations. Other members prepare the actual presentation to the steering committee.

Step four is a "People-building" experience for staff members and administration. It gives credibility to circle members as being "expert" in their area of study and it offers staff members and administrators the chance to engage in positive communication for a common cause.

Step. #5. REVIEW BY MANAGEMENT

The normal flow of authority of the organization is followed in the Quality Circle procedures. The presentation to the steering committee involves administrators and staff members who work together during the normal work day. Higher levels of administration are welcome to attend the presentation of recommendations, but are there only as observers and not active steering committee members.

Because of the close day to day communication between circle members and steering committee members, many recommendations are accepted at the end of the presentation process outlined in step four. Some recommendations may require the steering committee to spend time of their own evaluating the request and discussing the proposition further.

The steering committee may request further information from the circle members regarding one part or another of the recommendation, or they may request that an outside consultant be used to provide further expertise to a particular recommendation.

Because of the various needs of all concerned, the review by management may take several weeks in some cases.

Step #6. MANAGEMENT DECISION AND IMPLEMENTATION

If recommendations are accepted by the steering committee, both circle members and administration work together to implement the recommendations identified by teachers.

If the recommendations are not accepted by the steering committee, the circle members either elect to re-evaluate the interest area with the idea of a new presentation in the future or they elect to disregard the area of interest and move to the next item on the priority list. The process continues in a revolving manner.

The above scenario then is an explanation in brief of how the six Quality Circle procedures work in a modified version to suit an educational setting with professional staff members.

The twelve statements listed below deal with the DESIRABILITY and FEASIBILITY of using these modified procedures with the professional staff in the school.

Each statement offers four levels of acceptance. Please indicate your level of acceptance by circling the number of responses closest to your attitude.

(1)	Procedure number one (Problem Identification) is desirable to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(2)	Procedure number one (Problem Identification) is feasible to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(3)	Procedure number two (Problem Selection) is desirable to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(4)	Procedure number two (Problem Selection) is feasible to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(5)	Procedure number three (Recommendations to Management) is desirable to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(6)	Procedure number three (Recommendations to Management) is feasible to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(7)	Procedure number four (Review by Management) is desirable) to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(8)	Procedure number four (Review by Management) is feasible to use with professional staff members in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree
(9)	Procedure number five (Management Decision and Implementation) is desirable to use with professional staff in the school setting.	(1) (2) (3) (4)	strongly disagree mildly disagree mildly agree strongly agree

(10)	Procedure number five (Management Decision and Implementation) is <u>feasible</u> to use with professional staff in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(11)	As a comprehensive package, the six procedures used in the scenario are <u>desirable</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(12)	As a comprehensive package, the six procedures used in the scenario are <u>feasible</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree

Additional Comments:

APPENDIX B

INTRODUCTORY LETTER, DESCRIPTION OF QUALITY CIRCLES PROGRAM, SCENARIO, QUALITY CIRCLES PROCEDURES AND SURVEY FOR STUDY

Dear

This letter is written to you requesting your participation in a survey I am conducting for a doctoral study through Drake University. The information from the study will provide me with building principals' attitudes toward using a modified version of the Quality Circle Program in the educational setting with professional staff members.

Materials in this packet will explain the six procedures used in this modified version of Quality Circles. There will also be information regarding some of the communication tools used to implement the six procedures.

I will be asking you to read scenario which uses these six procedures on a hypothetical school setting. Following the scenario there will be a list of fourteen statements concerning these procedures. Please respond to these statements by circling the statement closest to your attitude.

Your participation in this survey is of great importance to me and is very much appreciated.

Respectfully,

D. R. Dakken

Quality Circles is a program conceived to increase the quality of work and the productivity of the workers in the organization. The program is based upon behavioral science concepts and is aimed at building positive relations between workers and management for the success of the organization.

When used in schools, professional staff members are divided into individual circles of anywhere from eight to twelve participants. Each circle is operated by a team leader who has had extensive training in people oriented skills such as brainstorming, concensus reaching, listening skills, group data gathering and presentation skills.

Each circle concentrates on areas of interest particular only to their work responsibility. They deal with mundane day to day situations that can be improved to make their work of a higher level of quality and productivity. Circle members never attempt to undertake concerns that directly affect other workers outside of their circle. Because of this philosophy, areas such as management and policy-making are left to administration and board.

When individual circles reach the point in their studies where they are ready to make recommendations for change to management, these recommendations (in the school setting) are made to a steering committee composed of school administrators.

The scenario you are about to read will take you through the six procedures used in the Quality Circle program. The steps will be explained briefly, but will accurately portray each procedure.

Scenario

River City Community School District has a K-12 enrollment of 1,300 students. The professional staff numbers 100 teachers.

River City has been involved in the Quality Circle program for four years now and supports ten circles of ten members each. Each circle is led by a staff member well trained in teaching other members of the circle, the skills of brainstorming, concensus reading, data gathering, communications and presentation skills.

PROCEDURES

Step #1. PROBLEM IDENTIFICATION

Under the leadership of the circle head, the team members brainstorm areas of their work that could be improved to provide a higher level of quality and productivity. Through the brainstorming and recording processes, all identified areas that affect the circle's quality of work and level of productivity are listed for consideration.

Step #2. PRIORITIZING AREAS OF INTEREST

After listing the areas of interest established by the brainstorming process, the circle members use such skills as concensus reaching, active listening skills and data gathering to establish a priority list of areas to study. One area of interest above all others is selected by the circle for immediate study.

Step #3. ANALYSIS OF INTEREST AREA

Step three involves all circle members in dividing research responsibilities so the interest area may be fully evaluated during its weekly meetings. As the analysis of the interest area progresses, objectives and time lines are set, problem-solving activities engaged in, and outside consultants used if required. Step three is concluded when the circle has analyzed the area of interest in every way and reached group concensus on its recommendation to management.

Step #4. RECOMMENDATION TO MANAGEMENT

This step is important to staff members and administration alike as it provides the organization with recommendations that could benefit the total system. This step also offers the members of the circle the opportunity for positive professional recognition for their work.

In preparing the presentation, all circle members are active in one facet or another of the project. Some members prepare charts, diagrams and written material to be used to support research and recommendations. Other members prepare the actual presentation to the steering committee. Step four is a "people-building" experience for staff members and administration. It gives credibility to circle members as being "expert" in their area of study and it offers staff members and administrators the chance to engage in positive communication for a common cause.

Step. #5. REVIEW BY MANAGEMENT

The normal flow of authority of the organization is followed in the Quality Circle procedures. The presentation to the steering committee involves administrators and staff members who work together during the normal work day. Higher levels of administration are welcome to attend the presentation of recommendations, but are there only as observers and not active steering committee members.

Because of the close day to day communication between circle members and steering committee members, many recommendations are accepted at the end of the presentation process outlined in step four. Some recommendations may require the steering committee to spend time of their own evaluating the request and discussing the proposition further.

The steering committee may request further information from the circle members regarding one part or another of the recommendation, or they may request that an outside consultant be used to provide further expertise to a particular recommendation. Because of the various needs of all concerned, the review by management in some cases may take several weeks.

Step #6. MANAGEMENT DECISION AND IMPLEMENTATION

If recommendations are accepted by the steering committee, circle members and administration work together to implement the recommendations identified by teachers. If the recommendations are not accepted by the steering committee, the circle members either elect to re-evaluate the interest area with the idea of a new presentation in the future or they elect to disregard the area of interest and move to the next item on the priority list. The process continues in a revolving manner.

The above scenario then is an explanation in brief of how the six Quality Circle procedures work in a modified version to suit an educational setting with professional staff members. The fourteen statements listed below deal with the DESIRABILITY and FEASIBILITY of using these modified procedures with the professional staff in the school. Each statement offers four levels of acceptance. Please indicate your level of acceptance by circling the number of responses closest to your attitude.

(1)	Procedure number one (Problem Identification) is desirable to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(2)	Procedure number one (Problem Identification) is feasible to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(3)	Procedure number two (Prioritizing Areas of Interest) is desirable to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(4)	Procedure number two (Prioritizing Areas of Interest) is feasible to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(5)	Procedure number three (Analysis of Interest Area) is desirable to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(6)	Procedure number three (Analysis of Interest Area) is feasible to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(7)	Procedure number four (Recommendation to Management) is desirable to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(8)	Procedure number four (Recommendation to Management) is feasible to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(9)	Procedure number five (Review by management) is desirable to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree

(10)	Procedure number five (Review by management) is <u>feasible</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(11)	Procedure number six (Management Decision) is <u>desirable</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(12)	Procedure number six (Management Decision) is <u>feasible</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(13)	As a comprehensive package, the six procedures used in the scenario are <u>desirable</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree
(14)	As a comprehensive package, the six procedures used in the scenario are <u>feasible</u> to use with professional staff members in the school setting.	(1) strongly disagree (2) mildly disagree (3) mildly agree (4) strongly agree

Additional Comments:

April 4, 1984

Dear

Just a brief note to follow up the information packet I sent you regarding the Quality Circle program in education. If you have not yet had the opportunity to fill out the brief questionnaire regarding Quality Circles, I would very much appreciate your being able to do so as soon as possible.

The information I gather from administrators like yourself will furnish me with valuable data for the basis of my study. Your help is very much needed and greatly appreciated. I hope you have a good ending to your school year.

Respectfully,

D. R. Dakken

APPENDIX C

SUBQUESTION 1

Does the size of school district affect the way the principal perceives the desirability of using each individual quality circles procedure with professional staff members to improve productivity and quality of work?

Table 1-A

Procedure One (Problem Identification)
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	1/7.7%	12/92.3%	13/100%
Total	1/5%	19/95%	20/100%

Table 1-B

Procedure One (Problem Identification)
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	13/100%	13/100%
Large School Principals	0/0%	6/100%	6/100%
Total	0/0%	19/100%	19/100%

Table 1-C

Procedure One (Problem Identification)
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	1/5%	19/95%	20/100%

Table 2-A

Procedure Two (Prioritizing Areas of Interest)
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	2/15.3%	11/84.7%	13/100%
Total	2/10%	18/90%	20/100%

Table 2-B

Procedure Two (Prioritizing Areas of Interest)
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	13/100%	13/100%
Large School Principals	0/0%	6/100%	6/100%
Total	0/0%	19/100%	19/100%

Table 2-C

Procedure Two (Prioritizing Areas of Interest)
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/8.3%	11/91.7%	12/100%
Large School Principals	0/0%	8/100%	8/100%
Total	1/5%	19/95%	20/100%

Table 3-A

Procedure Three (Analysis of Interest Area)
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/14.3%	6/85.7%	7/100%
Large School Principals	3/23%	10/77%	13/100%
Total	4/20%	16/80%	20/100%

Table 3-B

Procedure Three (Analysis of Interest Area)
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	13/100%	13/100%
Large School Principals	1/16.7%	5/83.3%	6/100%
Total	1/5.2%	18/94.8%	19/100%

Table 3-C

Procedure Three (Analysis of Interest Area)
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/8.3%	11/91.7%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	2/10%	18/90%	20/100%

Table 4-A

Procedure Four (Recommendation to Management)
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/14.3%	6/85.7%	7/100%
Large School Principals	1/7.6%	12/92.4%	13/100%
Total	2/10%	18/99%	20/100%

Table 4-B

Procedure Four (Recommendation to Management)
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	13/100%	13/100%
Large School Principals	0/0%	6/100%	6/100%
Total	0/0%	19/100%	19/100%

Table 4-C

Procedure Four (Recommendation to Management)
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	1/5%	19/95%	20/100%

Table 5-A

Procedure Five (Review by Management)
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	4/30.7%	9/69.3%	13/100%
Total	4/20%	16/80%	20/100%

Table 5-B

Procedure Five (Review by Management)
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/15.4%	11/84.6%	13/100%
Large School Principals	1/16.7%	5/83.3%	6/100%
Total	3/15.8%	16/84.2%	19/100%

Table 5-C

Procedure Five (Review by Management)
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/8.3%	11/91.6%	12/100%
Large School Principals	0/0%	8/100%	8/100%
Total	1/5%	19/95%	20/100%

Table 6-A

Procedure Six (Management Decision)
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	2/15.3%	11/84.7%	13/100%
Total	2/10%	18/90%	20/100%

Table 6-B

Procedure Six (Management Decision)
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	13/100%	13/100%
Large School Principals	1/16.7%	5/83.3%	6/100%
Total	1/5.3%	18/94.7%	19/100%

Table 6-C

Procedure Six (Management Decision)
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/8.4%	11/91.6%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	2/10%	18/90%	20/100%

APPENDIX D

SUBQUESTION 2

Does the size of school district affect the way the principal perceives the feasibility of using each individual quality circles procedure with professional staff members to improve productivity and quality of work?

Table 7-A

Procedure One (Problem Identification)
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	1/7.7%	12/92.3%	13/100%
Total	1/5%	19/95%	20/100%

Table 7-B

Procedure One (Problem Identification)
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/7.7%	12/92.3%	13/100%
Large School Principals	0/0%	6/100%	6/100%
Total	1/5.2%	18/94.8%	19/100%

Table 7-C

Procedure One (Problem Identification)
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	1/5%	19/95%	20/100%

Table 8-A

Procedure Two (Prioritizing Areas of Interest)
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/14.2%	6/85.8%	7/100%
Large School Principals	1/7.6%	12/92.4%	13/100%
Total	2/10%	18/90%	20/100%

Table 8-B

Procedure Two (Prioritizing Areas of Interest)
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/15.3%	11/84.7%	13/100%
Large School Principals	0/0%	6/100%	6/100%
Total	2/10.5%	17/89.5%	19/100%

Table 8-C

Procedure Two (Prioritizing Areas of Interest)
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	1/5%	19/95%	20/100%

Table 9-A

Procedure Three (Analysis of Interest Area)
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/28.6%	5/71.4%	7/100%
Large School Principals	3/23%	10/77%	13/100%
Total	5/25%	15/75%	20/100%

Table 9-B

Procedure Three (Analysis of Interest Area)
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	3/23%	10/77%	13/100%
Large School Principals	1/16.7%	5/83.3%	6/100%
Total	4/21%	15/79%	19/100%

Table 9-C

Procedure Three (Analysis of Interest Area)
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	0/0%	8/100%	8/100%
Total	0/0%	20/100%	20/100%

Table 10-A

Procedure Four (Recommendation to Management)
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/28.6%	5/71.4%	7/100%
Large School Principals	3/23%	10/77%	13/100%
Total	5/25%	15/75%	20/100%

Table 10-B

Procedure Four (Recommendation to Management)
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	5/38.4%	8/61.6%	13/100%
Large School Principals	1/16.7%	5/83.3%	6/100%
Total	6/31.6%	13/68.4%	19/100%

Table 10-C

Procedure Four (Recommendation to Management)
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	1/12.5%	7/87.5%	8/100%
Total	1/5%	19/95%	20/100%

Table 11-A

Procedure Five (Review by Management)
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	4/30%	9/69.3%	13/100%
Total	4/20%	16/80%	20/100%

Table 11-B

Procedure Five (Review by Management)
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/15.3%	11/84.7%	13/100%
Large School Principals	1/16.7%	5/83.3%	6/100%
Total	3/15.8%	16/84.2%	19/100%

Table 11-C

Procedure Five (Review by Management)
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/8.3%	11/91.7%	12/100%
Large School Principals	0/0%	8/100%	8/100%
Total	1/5%	19/95%	20/100%

Table 12-A

Procedure Six (Management Decision)
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/28.4%	5/71.6%	7/100%
Large School Principals	4/30.8%	9/69.2%	13/100%
Total	6/30%	14/70%	20/100%

Table 12-B

Procedure Six (Management Decision)
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/15.3%	11/84.7%	13/100%
Large School Principals	1/16.8%	5/83.6%	6/100%
Total	3/15.8%	16/84.2%	19/100%

Table 12-B

Procedure Six (Management Decision)
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	2/25.2%	6/74.8%	8/100%
Total	2/100%	18/90%	20/100%

APPENDIX E

SUBQUESTION 3

Does the size of school district affect the way the principal perceives the desirability of using all six quality circles procedures with with professional staff members to improve productivity and quality of work?

Table 13-A

All Six Quality Circles Procedures
Desirability Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	7/100%	7/100%
Large School Principals	2/14.5%	11/85%	13/100%

Table 13-B

All Six Quality Circles Procedures
Desirability Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	13/100%	13/100%
Large School Principals	1/16%	5/84%	6/100%

Table 13-C

All Six Quality Circles Procedures
Desirability Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	1/8%	11/92%	12/100%
Large School Principals	1/12%	7/88%	8/100%

APPENDIX F

SUBQUESTION 4

Does the size of school district affect the way the principal perceives the feasibility of using all six quality circles procedures with professional staff members to improve the productivity and quality of work?

Table 14-A

All Six Quality Circles Procedures
Feasibility Factor Small and Large Elementary Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/28%	5/72%	7/100%
Large School Principals	4/30%	9/70%	13/100%

Table 14-B

All Six Quality Circles Procedures
Feasibility Factor Small and Large Middle/Junior High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	2/15%	11/85%	13/100%
Large School Principals	1/16%	5/84%	6/100%

Table 14-C

All Six Quality Circles Procedures
Feasibility Factor Small and Large High Schools
(N/%)

	Disagree	Agree	Total
Small School Principals	0/0%	12/100%	12/100%
Large School Principals	2/25%	6/75%	8/100%

APPENDIX G

SUBQUESTION 5

Does the level of administrative responsibility affect the way the principal views the desirability of using each individual quality circles procedure with professional staff members to improve productivity and quality of work?

Table 15-A

Procedure One (Problem Identification)
Desirability Factor, Elementary, Middle/Junior High,
High School Principles
(N/%)

	Disagree	Agree	Total
Elementary School Principals	1/5%	19/95%	20/100%
Middle School Principals	0/0%	19/100%	19/100%
High School Principals	0/0%	20/100%	20/100%

Table 15-B

Procedure Two (Prioritizing Areas of Interest)
Desirability Factor Elementary, Middle/Junior High
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	2/10%	18/90%	20/100%
Middle School Principals	0/0%	19/100%	19/100%
High School Principals	1/5%	19/95%	20/100%

Table 15-C

Procedure Three (Analysis of Interest Area)
Desirability Factor, Elementary, Middle/Junior High
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	4/20%	16/80%	20/100%
Middle School Principals	1/5.3%	18/94.7%	19/100%
High School Principals	2/10%	18/90%	20/100%

Table 15-D

Procedure Four (Recommendation to Management)
Desirability Factor Elementary, Middle/Junior High
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	1/5%	19/95%	20/100%
Large School Principals	0/0%	19/100%	19/100%
High School Principals	1/5%	19/95%	20/100%

Table 15-E

Procedure Five (Review by Management)
Desirability Factor Elementary, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	4/20%	16/80%	20/100%
Large School Principals	1/5.3%	18/94.7%	19/100%
High School Principals	1/5%	19/95%	20/100%

Table 15-F

Procedure Six (Management Decision)
Desirability Factor, Elementary, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	2/10%	18/90%	20/100%
Middle School Principals	1/5.3%	18/94.7%	19/100%
High School Principals	2/10%	18/90%	20/100%

APPENDIX H

SUBQUESTION 6

Does the level of administrative responsibility affect the way the principal views the feasibility of using each individual quality circles procedure with professional staff members to improve productivity and quality of work?

Table 16-A

Procedure One (Problem Identification)
Feasibility Factor, Elementary, Middle/Junior High
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	1/5%	19/95%	20/100%
Middle School Principals	1/5.3%	18/94.7%	19/100%
High School Principals	1/5%	19/95%	20/100%

Table 16-B

Procedure Two (Prioritizing Areas of Interest)
Feasibility Factor, Elementary, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	2/10%	18/90%	20/100%
Middle School Principals	2/10.6%	17/89.4%	19/100%
High School Principals	1/5%	19/95%	20/100%

Table 16-C

Procedure Three (Analysis of Interest Area)
Feasibility Factor, Elementary, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	5/25%	15/75%	20/100%
Middle School Principals	4/21.1%	15/78.9%	19/100%
High School Principals	0/0%	20/100%	20/100%

Table 16-D

Procedure Four (Recommendation to Management)
Feasibility Factor, Elementar, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	5/25%	15/75%	20/100%
Middle School Principals	6/32%	13/68%	19/100%
High School Principals	1/5%	19/95%	20/100%

Table 16-E

Procedure Five (Review by Management)
Feasibility Factor, Elementar, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	4/20%	16/80%	20/100%
Middle School Principals	3/15.8%	16/84.2%	19/100%
High School	1/5%	19/95%	20/100%

Table 16-F

Procedure Six (Management Decision)
Feasibility Factor, Elementary, Middle/Junior High,
High School Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	6/30%	14/70%	20/100%
Middle School Principals	3/15.8%	16/84.2%	19/100%
High School Principals	2/10%	18/90%	20/100%

APPENDIX I

SUBQUESTION 7

Does the level of administrative responsibility affect the way the principal views the desirability of using the quality circles program with professional staff members to improve productivity and quality of work?

Table 17-A

Quality Circles Program
Desirability Factor, Elementary Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	4/20%	16/80%	20/100%

Table 17-B

Quality Circles Program
Desirability Factor, Middle Schools
(N/%)

	Disagree	Agree	Total
Middle School Principals	1/5%	18/95%	19/100%

Table 17-C

Quality Circles Program
Desirability Factor, High School Principals
(N/%)

	Disagree	Agree	Total
High School Principals	2/10%	18/90%	20/100%

APPENDIX J

SUBQUESTION 8

Does the level administrative responsibility affect the way the principal views the feasibility of using the quality circles program professional staff members to improve productivity and quality of work?

Table 18-A

Quality Circles Program
Feasibility Factor, Elementary Principals
(N/%)

	Disagree	Agree	Total
Elementary School Principals	15/75%	5/25%	20/100%

Table 18-B

Quality Circles Program
Feasibility Factor, Middle Schools
(N/%)

	Disagree	Agree	Total
Middle School Principals	15/79%	4/21%	19/100%

Table 18-C

Quality Circles Program
Feasibility Factor, High School Principals
(N/%)

	Disagree	Agree	Total
High School Principals	20/100%	0/0%	20/100%